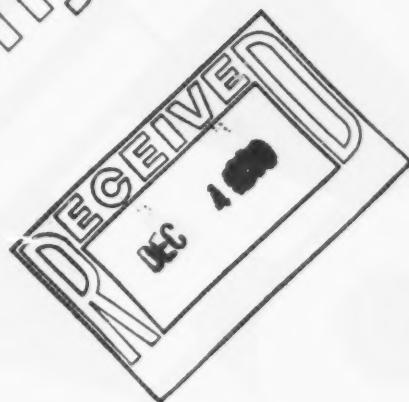


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the alaska economic information & reporting system

quarterly report
october 1979



alaska
division of economic
enterprise

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**THE
ALASKA ECONOMIC
INFORMATION AND REPORTING SYSTEM**

**QUARTERLY REPORT
OCTOBER 1979**

**STATE OF ALASKA
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FORWARD

In this report we present and discuss our current CONTROL or "best judgement" forecast of the Alaska economy. While this is an econometric forecast in the sense that it has been made with the AEIRS quarterly econometric model, it is not solely the product of that model. Where it seemed appropriate we have judgmentally adjusted the forecast to take account of recent information on the pace of economic activity, and have also fine tuned the model where preliminary testing suggested the need. This is standard practice and reflects the fact that economic model building is still an imperfect art.

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SUMMARY

New evidence now available continues to support the conclusion that Alaska's post-pipeline economic letdown has bottomed out this year, and that the State has entered a period of steady sustainable growth.

Final first calendar quarter 1979 nonagricultural employment data are now available. Compared to a year earlier, the data show a small increase of 1.5 percent in the number of jobs filled statewide.

On a regional basis the first quarter performance was mixed, with Anchorage showing a 0.8 percent year-to-year **increase**, Fairbanks a 0.4 percent **decrease**, and the rest of the State a net 4.4 percent increase.

The present AEIRS statewide forecast continues to show a slight 0.5 percent year-to-year employment increase for 1979 as a whole, despite an estimated 991 fewer jobs filled in the third quarter than in the third quarter of 1978. The relatively weak summer employment peak estimated to have occurred this year is premised on an observed slowdown (relative to previous summers) in private construction activity and in oil drilling operations.

Looking ahead, the combination of declining interest rates, a more stimulative State government budget, increased drilling operations on the North Slope, and generally improved investment opportunities, is projected to move the economy ahead at an increasing rate in future years, with annual average nonagricultural employment gains of 2.8 percent and 4.1 percent now forecasted for 1980 and 1981, respectively. The projected 1980 rate of employment growth is lower than the 3.8 percent rate published in the July **Quarterly Report** for two principal reasons: (i) the recognition of probable seasonal drilling restrictions in the Beaufort Sea and (ii) reduced growth in federal government employment relative to previous estimates.

Anchorage consumer price inflation may have finally begun to abate. During the second three months of 1979, the Anchorage All Urban Consumer Price Index (CPIU) rose at an 8.5 percent annual rate, down from the 9.8 percent rate of the first three months and significantly below the 13.4 percent annual rate posted at the national level over the same period.

Despite the encouraging second quarter Anchorage inflation performance, the current AEIRS forecast calls for the Anchorage CPIU to continue to increase at about a nine percent rate for the next two years. In our opinion, only a major national recession or the imposition of mandatory wage-price controls stand much of a chance of changing this outlook.

National monetary policy has tightened since Paul Volcker took over as Chairman of the Board of Governors of the Federal Reserve System, with the latest move an increase to 12 percent in the discount rate. As a result, short term interest rates have approached or surpassed previous record highs. Despite this fact, there seems little likelihood that interest rates will stay at present levels beyond the first quarter of next year, unless the current

**THE ALASKA ECONOMY
PERFORMANCE SUMMARY
1976 to 1981**

	History			Forecast		
	1976	1977	1978	1979	1980	1981
Nonagricultural Employment	173,499	166,066	163,344	164,107	168,777	175,720
Percent Change	+6.5	-4.3	-1.6	+0.5	+2.8	+4.1
Resident Personal Income <u>1/</u>	4.187	4.275	4.370	4.758	5.524	6.373
Percent Change	+18.9	+2.1	+2.2	+8.9	16.1	15.4
Anchorage CPI (1967=1.000) <u>3/</u>	1.641	1.751	1.875	2.065	2.253	2.457
Percent Change	+6.5	+6.7	+7.1	10.1	9.1	9.1
Bank Deposits <u>2/</u>	1472.2	1607.0	1749.1	1844.5	2102.4	2333.4
Percent Change	+12.9	+9.2	+8.8	+5.5	+14.0	+11.0
Savings and Loan Deposits <u>2/</u>	173.5	206.0	216.3	221.8	238.3	260.8
Percent Change	+22.0	+18.7	+5.0	+2.5	+7.4	+9.4

1/ Billions of dollars.

2/ Millions of dollars. Average of January, April, July, and October end of month deposits for S&L's; average of March, June, September, and December end of month deposits for banks.

3/ Index for all urban workers.

Note: Nonagricultural employment in 1976 and 1977 exceeds present official Department of Labor estimates by the amount of an anticipated upward revision in local government employment.

national recession turns out to be milder than is now generally expected. If real GNP declines in the last half of 1979 and on into the first quarter of 1980, enough downward pressure should be placed on credit demand and on inflation, to directly lower interest rates, and also to induce the Federal Reserve to refrain from tightening credit any further.

Data Resources, Incorporated, one of the leading national forecasting teams, projects a decline from fourth quarter 1979 peaks of nearly 100 basis points (one percentage point) in the 90-day U.S. Treasury Bill rate by next summer, and roughly a 30 basis point decline in longer term interest rates over the same period. These projections are consistent with a moderate (U.S.) recession scenario.

Alaska bank and savings and loan deposits continue to increase at year-to-year rates below that of the Anchorage CPIU. On June 30, 1979, combined demand and time deposits at Alaska's commercial and mutual savings banks were up only 2.3 percent from a year earlier, while savings and loan association deposits were up only 3.6 percent. Over the same period the Anchorage CPIU rose 10.5 percent. Such a performance is to be expected during an economic slowdown, but is not expected to continue, now that the Alaska economy appears to have bottomed out. Premised on renewed growth in jobs and real income across the State, the present AEIRS projection is for deposit growth on the order of 11 to 14 percent annually at Alaska's banks, and on the order of 7 to 10 percent at the State's five savings and loan associations.

RECENT FEDERAL RESERVE ACTIONS

On October 6 the Board of Governors of the Federal Reserve System raised its discount rate to twelve percent and imposed higher reserve requirements on member banks. These moves were intended to restrict bank credit and thereby to slow the pace of the national economy. The ultimate goal is a reduction in the pace of inflation.

To the extent the policy is successful in slowing inflation, it will eventually lead to a reduction in interest rates from present levels. In the short run, however, interest rates will be pushed higher than previously expected, and credit will be tighter.

Because the present AEIRS forecast assumes no action on any potential major development projects before 1982, the Federal Reserve's recent moves have little effect on this forecast. This does not mean they will have no effect on Alaska. Higher interest rates and the gloom that could accompany an ensuing national recession may make it even more difficult to obtain financing in a timely manner for projects such as ALPETCO and the Northwest gasline.

If major Alaska projects are viewed as sound, they will ultimately be financed. The Federal Reserve actions of October 6 could, however, provide a further element of delay.

FAIRBANKS

The fact that the Fairbanks economy appears to have bottomed out this year is undoubtedly of little consolation to those who have become unemployed or underemployed since the mid-1977 completion of the TAPS line.

Present AEIRS estimates show that Fairbanks area employment will drop 6.2 percent in 1979 and come only partly back to the 1978 level in 1980 and 1981, with job gains for the two years of only 1.1 and 2.8 percent, respectively.

Fairbanks' longer term potential lies in tourism and mining. Substantial short run economic gains will not occur until the Northwest gas pipeline project gets underway.

II. CONTROL FORECAST

Final first quarter 1979 nonagricultural employment data show a 1.5 percent increase over the level posted in the first quarter of 1978. This increase was achieved in the face of a 2,765 job loss in construction and a 978 job loss in manufacturing. The big gainers were retail trade, up 1,241 jobs, services up 1,753 jobs, and local government, up 2,300 jobs. Given the "support" nature of the industries which showed year-to-year increases in 1979: 1, it is probable that the construction slowdown experienced this year had not fully impacted the trade and service sectors in the first quarter.

The present AEIRS employment forecast is similar to that released in July. A slight year-to-year employment increase is estimated to have occurred in the second quarter of this year (0.6 percent), followed by a small year-to-year decline in the third quarter (-0.6 percent). On the whole, statewide nonagricultural employment is expected to show a gain of 0.5 percent on an annual average basis in 1979, followed by stronger gains of 2.8 percent and 4.1 percent in 1980 and 1981.

Details of the forecast are discussed in the following paragraphs.

EVIDENCE ON 1979

Despite the encouraging employment performance of the first quarter, 1979 is likely to go down as, at best, the year the Alaska economy conclusively ended its post-pipeline period of letdown. Consider the evidence.

In real (inflation adjusted) terms the dollar value of construction permits authorized in Anchorage, the North Star Borough, and Juneau was down 18.7 percent through the first six months of 1979 compared to a year earlier. The associated decline in construction employment can be expected to have had a negative multiplier effect on the rest of the economy.

Adjusted for inflation, combined time and demand deposits at Alaska's commercial and mutual savings banks were down 7.5 percent on June 30, 1979, from the same date a year earlier. Inflation adjusted savings and loan deposits were down 6.5 percent from a year earlier on that date.

The Alaska Department of Health and Social Services reports that, through July, caseload for the Aid to Families with Dependent Children program (AFDC), was up 16.2 percent over the same period a year earlier, a figure nearly ten percentage points greater than the caseload increase posted for programs not so closely related to business cycle changes. (Old age assistance caseload was up 6.5 percent and Aid to the Disabled caseload up 7.7 percent through July.)

For the eight months ending August 31, 1979, personal and business filings for bankruptcy were up over the same period of 1978 by 57.8 percent in Anchorage, and by 120.0 percent in Fairbanks. (Source: U.S. District Bankruptcy Court, Anchorage)

Not all of the economic news in 1979 has been bad. The commercial salmon catch hit 87 million fish, up nearly nine percent from 1978. Preliminary catch data show that fishermen landed 0.8 million King salmon, 2.9 million Cohos, 5.7 million Chum salmon, 28.4 million Sockeyes and 49.0 million Pinks. Processors around the State were pushed to capacity during the peaks of the runs.

The number of tourists visiting Alaska appears to have increased by almost eight percent so far in 1979, despite rising gasoline prices and uncertain gasoline supplies.

Finally, State oil revenue projections have increased noticeably as a result of the latest round of OPEC price increases. If the Federal government does not take steps to lower the after tax wellhead price of Alaskan oil, the State should be in a position to both insure its financial future and to launch an effective economic development program.

The conclusion drawn here is that 1979 will show small gains in income and employment when the final data are in, but more importantly, will be seen as the year Alaska entered a period of long-term sustainable economic growth.

EMPLOYMENT IN 1980, 1981

The Alaska economy's 1980, 1981 performance depends heavily upon the start-up dates for a number of large projects, and, in some cases, upon whether they get started at all. The projects in question are the Alpetco refinery in Valdez, the Pacific Alaska LNG plant in Nikiski (which now has the go ahead from the Federal Energy Regulatory Commission), the Northwest gas pipeline project, and the newly proposed multi-faceted German development project suggested for Point McKenzie. The present forecast assumes no activity of any significant magnitude on any of these projects until 1982. The forecast does assume that a D-2 settlement will be reached in this Congress and that a successful Beaufort Sea oil lease will be held in December or January.

Support is building for the repeal of the Alaska State individual income tax. The control forecast assumes no repeal. However a special simulation of the effects of income tax repeal has been done. The results are presented and discussed in Section IV, below.

The principal thrust driving the present forecast the next two years comes from increased oil and hard rock exploration, increased tourism, increased State spending and lending, and small but positive real gains in private construction activity. In addition, fish and shellfish catches are assumed to stay at or near 1979 levels, while the timber harvest is projected to decline slightly in 1980 and 1981.

Given these assumptions the 1980 and 1981 forecasted employment growth rates of 2.8 percent and 4.1 percent breakdown into the following two-year annual average growth rates by industry: mining 22 percent; construction 8.1 percent; manufacturing 1.9 percent; transportation, communications, and public utilities, 3.0 percent; trade 2.6 percent; finance, insurance and real estate, 3.8 percent; services 1.5 percent; and government 2.0 percent.

A more detailed status report and forecast for the support sector industries is offered below in Section III.

INFLATION OUTLOOK

Consumer price inflation has finally shown signs of slowing. The Anchorage All Urban Consumer Price Index (CPIU) rose at an 8.5 percent annual rate in the second quarter of 1979, down encouragingly from the 9.8 percent rate of the first quarter, and significantly below the second quarter rate of 13.4 percent posted at the national level.

While the second quarter Anchorage inflation performance is good news, one should not get too excited about what could still prove to be a one quarter downward blip in the rate of growth of the index.

The present AEIRS inflation forecast anticipates further price buffeting from this year's OPEC oil price increases. At an annual average, the Anchorage CPIU is forecasted to show an overall 10.1 percent increase this year, followed by gains of 9.1 percent in 1980 and 1981. In our opinion, only a major national recession or the imposition of mandatory wage-price controls stands much of a chance of markedly altering this outlook, even given the recent "accord" between organized labor and the White House (which included membership of a labor representative on the President's Pay Advisory Committee).

A better understanding of the present AEIRS inflation forecast can be gained by separating inflation into two components: (1) a **core** rate of inflation determined by money supply changes and wholesale price increases which have previously occurred, and also by relatively firmly held price expectations, themselves partly determined by previous money supply changes and price increases; and (2) a **shock** component induced by generally unanticipated events such as the Iranian revolution and the resultant additional increases in OPEC oil prices.

Analysis of the 1970-1978 national inflation experience indicates a present U.S. core inflation rate for the next two years of between 7.0 and 8.5 percent.¹ If the Anchorage inflation rate returns to pre-pipeline form, on average it should increase annually only 98.4 percent as fast as the national average consumer price index, suggesting an Anchorage core inflation rate of between 6.9 and 8.4 percent.

The AEIRS Anchorage inflation forecast of 9.1 percent for the next two years lies above the estimated Anchorage core inflation rate both because (1) this year's OPEC shock has not yet worked its way through the national price structure, and (2) the response of Alaska consumer prices to recent energy price increases is expected to be delayed because of slack in the State's transportation industry (water and land) and an overly large inventory of housing and commercial space.

1/ Based on the 1970-1978 statistical relationships between the percent change in the CPI and the percent change in (a) the money supply; (b) the U.S. wholesale price index and; (c) an index of inflation expectations.

The text table compares the presently forecasted 1979, 1980 and 1981 year-to-year rates of consumer price inflation for Anchorage to the rate of increase experienced during the most recent twelve month period.

ANCHORAGE CONSUMER PRICE INFLATION*
(Percent)

	July 1978 to July 1979	1979	1980	1981
Apparel and Upkeep	-0.3	0.6	5.0	5.6
Food and Beverages	10.9	10.3	8.4	8.6
Entertainment	2.2	2.4	5.6	6.2
Housing	11.6	10.7	8.2	9.1
Transportation	10.0	11.3	13.7	11.6
Medical Care	9.0	10.4	10.3	10.4
Other Goods and Services	6.6	6.9	6.2	6.1
All Items	10.0	10.1	9.1	9.1

*As measured by the percent change in the Anchorage Consumer Price Index for all urban workers.

Consumer price indexes for Fairbanks are now being published bi-monthly by the U.S. Bureau of Labor Statistics. To date, insufficient data are available for detailed analysis. One can, however, expect similar rates of inflation in Anchorage and Fairbanks.

Since it was first published in February the Fairbanks All Urban Consumer price index has risen 5.5 percent (February through August), that is, at an annual rate of 11.3 percent. A slowdown in inflation is evident in Fairbanks also. Over the most recent two month period for which data are available, the index increased at a 9.1 percent annual rate, down 5.5 percentage points from the 14.6 percent annual rate of increase recorded between April and June.

INTEREST RATES

On October 6 the Federal Reserve Board raised the discount rate to 12.0 percent and increased reserve requirements on deposits. This action presages a period of continued high interest rates followed by a somewhat more severe U.S. recession than had previously been anticipated.

Interest rates rise when both borrowers and lenders anticipate higher inflation. When at the same time the Federal Reserve moves to tighten the money supply, interest rates rise still

further. The double digit national inflation rate seen this past year has brought both factors into play with the result that interest rates across the spectrum have reached or exceeded previous record highs.

Open market interest rates will stay at or near present levels until inflation slows noticeably at the national level. This slowing, in turn, will come only when one of two things happens: (1) the present (apparent) national recession worsens to the point where cyclical lows in productive capacity utilization are reached; or (2) the President and Congress impose mandatory wage-price controls.

Data Resources, Incorporated, one of the nation's leading forecasting teams, expects the national economy to slow sufficiently by next summer to lower short term interest rates by nearly 100 basis points (one percentage point) and long term interest rates by about 30 basis points from fourth quarter peaks. Their forecast for selected interest rates is given in the text table along with the AEIRS forecast of the Seattle conventional mortgage rate. (A proxy for Alaska mortgage rates.)

SELECTED INTEREST RATES (Percent)

	Calendar Quarters								
	History					Forecast			
	78:2	78:3	78:4	79:1	79:2	79:3	79:4	80:1	80:2
90-day U.S. Treasury Bills	6.48	7.31	8.57	9.38	9.38	9.71	10.48	9.78	8.97
90-day Euro-dollar Rate	7.86	8.70	11.09	10.87	10.63	11.59	12.32	11.35	10.21
Moody's AAA Corporates	8.67	8.75	9.03	9.29	9.39	9.29	9.51	9.45	9.41
State & Local AAA General Obligations	5.57	5.63	5.68	5.81	5.72	5.78	5.97	5.89	5.74
Conventional Mortgage Rate, Seattle	9.66	9.96	10.15	10.57	10.67	11.04	11.32	10.84	10.63

ACKNOWLEDGEMENT:

Forecasts of all but the Seattle Mortgage rate were obtained from Data Resources, Incorporated's September 26, 1979 Control Forecast of the U.S. Economy.

ALASKA FINANCIAL FLOWS

A national economic slowdown need not imply financial problems for Alaska. Reduced inflation and lower interest rates should help to stimulate next year's Alaska economy. Given real income and employment growth for the State of Alaska of from two to four percent, bank deposits and savings and loan deposits should show year-to-year percentage increases greater than the rate of inflation by late 1980.

The present AEIRS Control Forecast projects deposit growth of 14.0 percent in 1980 and 11.0 percent in 1981 at Alaska's commercial and mutual savings banks. At the five Alaska savings and loan associations, slightly slower annual deposit growth of 7.4 percent in 1980 and 9.5 percent in 1981 is expected. The forecasted rates of deposit growth are lower at the S&L's than at the banks because the S&L's depend relatively heavily on personal deposits and on deposits from the slower growing regions of the State.

One important feature of the Alaska financial outlook is the absence of a bank liquidity crisis in 1980. Nationally, the Volcker Fed will probably be successful in limiting the availability of bank credit. In Alaska, renewed economic growth backed up by possible infusions of State deposits should keep the system on its feet.

III. A CLOSER LOOK AT ALASKA'S SUPPORT SECTOR

For purposes of this section of the **REPORT**, the support sector of the Alaska economy will be defined to include the following industries: trade, services, transportation, communications, public utilities, finance, insurance, and real estate.

HISTORICAL GROWTH

Since 1960, the annual average rate of growth of nonagricultural wage and salary employment in Alaska's support industries has consistently surpassed the corresponding rate of employment growth for the Alaska economy as a whole. Table III-1 illustrates this point.

TABLE III-1
EMPLOYMENT GROWTH
ANNUAL AVERAGE RATES
SELECTED ALASKA INDUSTRIES
(Percent)

	1960 to 1963	1964 to 1969	1969 to 1973	1973 to 1978
Wholesale Trade	3.6	11.4	3.9	11.7
Retail Trade	3.6	9.1	7.8	8.6
Services	4.4	8.8	9.7	12.5
Transportation	-3.6	6.9	1.7	9.3
Communications	11.3	-0.7	11.0	7.1
Public Utilities	12.0	5.6	14.7	5.0
Finance, Ins., Real Estate	8.1	6.1	12.4	14.2
Total Support	3.3	7.9	7.6	11.0
Total Nonagricultural	1.1	5.8	6.1	8.0

Source: Compiled from data in **Statistical Quarterly**, (Alaska Department of Labor).

Note: Prior to 1964, only jobs covered by unemployment insurance were included in the reported data. Thus, the pre-1964 period is not strictly comparable with the period beginning in 1964.

For each of the four time periods shown in that table (on the whole, the years 1960 to 1978) the annual average rate of employment growth in the Alaska support sector exceeded that of the entire Alaska economy by a minimum of 1.5 percentage points per time period.

As economies develop, both support sector expansion and support sector deepening takes place. The latter concept, support sector deepening, refers to the process whereby new goods and services are provided, and whereby per capita increases occur in the availability of goods and services already provided. The Alaska support sector deepened between 1960 and 1978, not only because Alaska was (and remains) relatively undeveloped and was catching up with the rest of the country, but also because the American lifestyle, in general,

was becoming more demanding of new and more specialized goods and services. For the foreseeable future, this pattern of development should continue except for brief periods when the government sector picks up economic slack or when the construction industry is on the rebound from a cyclical low and showing large year-to-year percentage gains.

Examples of support sector deepening which has occurred or which is likely to occur in Alaska include (i) the replacement of certain mail order outlets with full service stores; (ii) establishment of Alaska offices where previously the State has been served from the Lower 48; (iii) the opening of specialized retail outlets such as "McDonald's" and "Burger King"; (iv) the establishment of other specialized retail and service sector operations, tobacco stores, hobby shops, salons; (v) a per capita increase in the availability of professional services, such as those of doctors, lawyers, accountants, economists, and engineers; and (vi) increased availability of public services per capita such as police, fire and transportation.

Support sector deepening explains the largest part of the extra growth in the support industries shown in Table III-1.

CHANGING SEASONALITY

Every year the Alaska economy becomes less subject to seasonal dips and increases. Increased cold weather construction activity, the beginnings of winter tourism, the advent of year-round manufacturing such as the ammonia-urea operations on the Kenai Peninsula, and the increased importance of government spending, have all played a part in reducing the economy's seasonality.

TABLE III-2
STATE OF ALASKA
INDEX OF EMPLOYMENT SEASONALITY, SELECTED INDUSTRIES*

	1960	1970	1978
Trade	.826	.869	.899
Services	.770	.937	.874
Transportation	.784	.854	.871
Communications	.876	.899	.939
Public Utilities	.835	.885	.847
Finance, Ins., Real Estate	.888	.793	1.012
Total Support	.810	.881	.898

* Ratio of January, February and March nonagricultural employment to July, August and September nonagricultural employment.

Source: Compiled from data published by the Alaska Department of Labor in the **Statistical Quarterly**.

Table III-2 presents one measure of declining seasonality in the support sector. That measure is the ratio of first calendar quarter employment to third calendar quarter employment for the years 1960, 1970, and 1978.

Between 1960 and 1970, all but finance, insurance and real estate of the selected support sector industries showed an increase in first quarter employment relative to third quarter employment. Since 1970, only services and public utilities have failed to record a point-to-point decline in seasonality, as measured by this index.

Over the entire 1960 to 1978 period, all six support sector industries showed a decline in seasonality. In 1960, first quarter employment was only 81 percent of third quarter employment for the sector as a whole. In 1978, it was nearly 90 percent.

Given the planned development of a winter bottomfish industry, the growth of winter tourism, and possible innovations in winter construction techniques and scheduling, Alaska's workforce can look forward to a further smoothing of annual employment across the year in the decades to come.

STATUS AS OF 1977, 1978

After relating 18 years of support sector expansion, deepening and reductions in seasonality, it seems appropriate to draw as clear a picture as possible of where Alaska's support industries are today. Data from the 1977 **Census of Wholesale and Retail Trade**, and from the Census Bureau's **1977 Alaska County Business Patterns** help to do just that by providing the best available estimates (if not the only estimates) of wholesale and retail sales and of the distribution of support sector establishments by employee size class.¹

According to the 1977 Industry Census, there were in Alaska 649 establishments engaged in wholesale trade, with 1977 sales of \$1.563 billion, and 3,781 retail establishments with 1977 sales of \$1.831 billion.

Wholesale sales were paced by sales of (1) petroleum and petroleum products, \$532 million or 34.1 percent of total sales; (2) groceries and related products, \$270 million or 17.3 percent of the total; and (3) machinery equipment and supplies, \$262 million or 16.8 percent of the total.

Among retailers the leading sellers were (1) grocery stores, \$410 million or 22.4 percent of total retail sales; (2) eating and drinking places, \$254 million or 13.9 percent of the total; (3) automotive dealers, \$241 million or 13.2 percent of the total; and (4) general merchandise stores with \$227 million in annual sales or 12.4 percent of the total.

1/ As of this writing, the 1977 **Census of Selected Service Industries** had not yet been published.

Table III-3 summarizes these data and also shows the 1978 industry employment levels, the 1978 percent of establishments with fewer than ten employees, and the 1977 percent of total payrolls accounted for by establishments with fewer than ten employees.

**TABLE III-3
SELECTED CHARACTERISTICS
ALASKA'S SUPPORT SECTOR**

	1977 Sales (Millions)	A ¹	B ¹	1978 Total Employment
Wholesale Trade	\$1562.7	75.7	28.9	5,721
Retail Trade	\$1830.7	75.2	25.1	23,127
Personal Services	-----	88.8	44.8	1,164
Business Services	-----	79.1	22.9	5,164
Health Services	-----	84.1	24.4	5,502
Other Services	-----	81.0	31.0	15,756
Finance, Insurance and Real Estate	-----	77.3	D	8,228
Transportation	-----	67.0	D	10,922
Communications	-----	45.0	2.9	4,052
Public Utilities	-----	59.6	D	1,406

1/ Column A is "percent of firms with fewer than ten employees." Column B is "percent of payrolls from firms with fewer than ten employees."

D - Data withheld to prevent disclosure of individual firm operations.

Source: U.S. Bureau of Census and Alaska Department of Labor.

If a small firm is defined to be one with fewer than ten employees, then small firms pre-dominant in number but, typically, account for less than 30 percent of industry payrolls.

OUTLOOK THROUGH 1981

For the next two years, the Alaska support sector is forecasted to be in the unusual position of exhibiting employment growth rates below that of the economy as a whole. While the support sector is indeed projected to show positive employment growth, the 2.2 percent and 3.3 percent rates forecasted for 1980 and 1981 are less than the 2.8 percent and 4.1 percent rates expected for the overall Alaska economy in those years.

There are three reasons for the **relatively** slow support sector growth anticipated over the next two years: (i) a moderate rebound in construction coming on the heels of a depressingly poor 1979 will numerically push up the overall average rate of employment growth relative to that of the support sector; (ii) strong gains in mining activity premised on a D-2 settlement and a successful Beaufort Sea oil lease will do the same; and (iii) weak to negative real (inflation adjusted) income growth in 1978 and 1979 has temporarily dampened profit expectations in the support industries and has led investors to proceed with greater caution than before.

If the projected 1980-1981 spurt in mining and construction activity proceeds on schedule, 1982, 1983 and 1984 should see substantial gains throughout the State's economy.

TABLE III-4
FORECASTED PERCENT CHANGE
NONAGRICULTURAL EMPLOYMENT
SELECTED INDUSTRIES

	Percent Change Over Previous Year				
	1977	1978	1979	1980	1981
Trade	3.2	1.4	1.3	3.0	4.3
Services	-0.7	0.6	0.7	0.9	2.0
Transportation	-2.9	3.3	-1.9	4.1	3.7
Communications	6.4	9.3	5.6	-0.5	1.9
Public Utilities	6.9	9.5	3.5	2.3	2.3
Finance, Ins., Real Estate	9.5	5.8	-2.3	2.9	4.7
Total Support Sector	1.6	2.3	0.5	2.2	3.3
Total Nonagricultural Employment	-4.3	-1.6	0.4	2.8	4.1

IV. STATE INCOME TAX REPEAL

The question of whether or not to repeal the Alaska individual income tax will be before the State Legislature in 1980. In this section an estimate is provided of the number of jobs which would be generated by income tax repeal if there were no offsetting reduction in State government spending, or offsetting increases in other State taxes and user charges.

The Alaska State income tax is deducted from federal adjusted gross income by those who itemize on their federal return. Therefore, only a portion of the proposed Alaska tax cut would go to taxpayers. The remainder would go to the federal government as a result of reduced itemized deductions on federal income tax returns. AEIRS estimates that, on average, taxpayers would receive 75 percent of the direct benefit of State income tax repeal, and the federal government would receive 25 percent. (A pure income increase such as the Governor's proposed "Energy Credit" would have essentially the same effect if it were used strictly as a dollar-for-dollar offset to State income taxes. The federal government would tax the payments to taxpayers at a rate only slightly in excess of that which would apply in the tax repeal case.)

Simulation results presented in this section do not, in and of themselves, imply that the income tax should be repealed. There are numerous considerations both pro and con which also need to be weighed in reaching a conclusion. Here we simply quantify one such consideration, namely the number of new jobs that might be created as a result of repeal.

The AEIRS econometric model was used to project the eleven quarter job creation impact of income tax repeal, where the legislation to repeal is assumed to be passed at the end of the 1980 legislative session and is assumed to be retroactively effective to April 1, 1980. The accompanying table presents the principal results.

The AEIRS model estimates that, by the end of 1982, State income tax repeal would generate 1,415 additional jobs in Alaska. It is highly probable that the bulk of these jobs would be in trade, services and transportation.

EFFECT OF STATE INCOME TAX REPEAL
(Dollar Amounts in Millions)

	Tax Cut¹	Effective Tax Cut²	Disposable Income Increase	Cumulative Job Gain	Income Multiplier³
1980:2	\$24.6	\$18.4	\$19.4	81	1.057
1980:3	53.2	39.9	43.9	328	1.099
1980:4	57.7	43.3	49.6	461	1.145
1981:1	37.8	28.4	33.8	611	1.189
1981:2	25.3	19.0	23.8	911	1.250
1981:3	68.7	51.5	66.7	1,105	1.295
1981:4	74.6	56.0	73.8	1,175	1.317
1982:1	50.5	37.9	50.4	1,205	1.330
1982:2	38.2	28.6	38.5	1,370	1.347
1982:3	86.4	64.8	87.4	1,396	1.349
1982:4	92.7	69.5	94.5	1,415	1.359

1/ Source: Alaska Department of Revenue.

2/ The effective tax cut equals 75 percent of total tax cut, given an assumed 25 percent effective marginal federal tax rate.

3/ Disposable income increase divided by the effective tax cut.

Notes: A. An alternative income distribution scheme which sent payments to taxpayers to precisely offset their Alaska State income taxes would have essentially the same job creation effects as those shown above.

B. No attempt has been made to estimate the effect of tax repeal on stimulating "large" new investments.

V. FAIRBANKS OUTLOOK

The Fairbanks area consists of the Fairbanks and Southeast Fairbanks census divisions.

In 1979 the Fairbanks area is estimated by AEIRS to have experienced a 6.2 percent year-to-year decline in nonagricultural employment. This is the single largest percentage decline estimated to have occurred in the State this year.

Final fallout from the completion of the oil pipeline, coupled with a share of the statewide slowdown in construction activity, account for Fairbanks' problems this year. The 120.0 percent increase in bankruptcy filings recorded in 1979 over the level of 1978 probably reflects last year's determination of many in the area to "stick it out" rather than close doors.

In general, things will get better in Fairbanks. The real questions are "when" and "by how much"? The 1.1 percent rate of employment growth projected for 1980 and the 2.8 percent rate projected for 1981 are premised on relatively modest assumptions. In particular, government expenditure is assumed to remain constant in real terms, and the number of tourists and vacationers in the area is assumed to rise by no more than three percent per year.

Declining mortgage interest rates and some increases in public construction should prevent a further deepening of the Fairbanks construction letdown in 1980. By 1981, a general aura of anticipation over startup of the gas pipeline project should give the area an added boost.

In the long term, Fairbanks's economic growth potential lies in tourism and mining. If a D-2 settlement is reached that allows access to Brooks Range mineralizations, and if ore prices remain high relative to other prices, Fairbanks' traditional role as service center and jumping off point to the Interior could be significantly expanded.

Details of the current AEIRS forecast are given in the text table. A point which should be noted is the discrepancy between the 17.8 percent 1979 CPS unemployment rate shown there and the much lower preliminary official CPS unemployment rates which have been published by the Alaska Department of Labor (DOL). The DOL estimates show a 4.4 percent year-to-year increase through July in the number of employed persons in the area, despite an estimated (by DOL) 6.8 percent year-to-year decrease in the number of nonagricultural wage and salary jobs. We believe the official 1979 Fairbanks area unemployment rates will be revised upward early next year.

A discussion of the Fairbanks inflation outlook is given above on page 8.

**STATE OF ALASKA
FAIRBANKS AND SOUTHEAST FAIRBANKS CENSUS DIVISIONS**

Forecasts of Economic Activity and Population to 1981

	1976	1977	1978	1979	1980	1981
Total Nonag. Employment	30,205	25,289	22,487	21,082	21,309	21,909
Federal Government	2,810	2,612	2,692	2,699	2,699	2,699
State & Local Gov.	4,896	4,780	5,096	5,100	5,100	5,100
Contract Construction	7,277	4,366	1,975	1,620	1,757	1,920
Trans., Communications and Public Utilities	3,500	2,945	2,789	2,412	2,430	2,502
Trade	4,752	4,427	4,159	3,930	3,941	4,162
Finance, Insurance, and Real Estate	1,017	962	1,019	925	932	952
Services	5,422	4,848	4,096	3,797	3,846	3,932
All Other	532	347	663	599	604	642
Payroll (\$'000)	839,573	593,920	483,499	493,859	555,591	618,373
Personal Income (\$'000)	840,282	687,103	554,374	566,138	634,641	704,451
Labor Force	28,847	24,398	23,452	21,023	21,549	22,195
Unemployment Rate (%)	7.2	13.1	17.8	17.8	17.9	17.8
Mid-Year Civilian Population	73,611	66,400	59,190	55,104	55,500	56,211

Forecast period is 1979 to 1981 except for personal income for which historical data are available only through 1977.

APPENDIX

Historical employment and income data published in the following tables have been revised in accordance with revisions released by the Alaska Department of Labor, and by the U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE I
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
POPULATION (TRENDED)	374.0	400.0	408.3	409.5	402.9	410.7	411.8	413.0	410.5	411.5
LABOR FORCE (CPS BASIS)	154.2	171.7	181.9	164.3	168.0	164.0	180.2	181.7	174.0	175.0
EMPLOYMENT (CPS BASIS)	138.6	157.2	169.7	150.6	154.0	146.9	166.1	168.4	156.6	159.0
UNEMPLOYMENT (CPS BASIS)	15.6	14.5	12.2	13.7	14.0	17.1	16.1	13.4	17.4	16.0
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	10.1	8.4	6.7	8.3	8.4	10.4	8.9	7.4	10.0	9.2

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	3.651	3.744	4.300	4.163	3.965	4.717	5.079	5.231	4.807	4.959
CONTRACT CONSTRUCTION	23.156	32.760	38.454	26.562	30.233	18.953	22.583	21.310	15.336	19.546
MANUFACTURING	7.402	10.500	14.027	9.400	10.331	8.035	11.487	14.579	9.480	10.895
LOGGING & SAWMILLS	1.107	2.106	2.451	2.117	1.945	1.643	2.575	2.444	1.663	2.081
PAPER & PULP PRODUCTS	1.199	1.188	1.280	1.126	1.198	1.176	1.427	1.238	1.150	1.248
MISC FOOD & KINDRED PRODUCTS	2.927	4.667	7.521	3.752	4.717	2.972	4.974	8.133	4.154	5.058
OTHER MANUFACTURING	2.169	2.539	2.770	2.405	2.471	2.244	2.511	2.764	2.513	2.508
TRANS-COMM. & PUBLIC UTILS	15.164	15.846	16.840	14.967	15.704	14.280	14.706	16.354	16.934	15.569
TRUCKING	3.010	3.004	3.217	3.034	3.066	2.583	2.441	2.630	2.118	2.443
WATER TRANSPORTATION	1.136	1.358	1.535	1.293	1.331	1.030	1.180	1.832	1.254	1.324
AIR TRANSPORTATION	4.402	4.847	5.009	4.314	4.643	4.079	4.449	4.597	4.365	4.373
OTHER TRANSPORTATION	2.131	1.722	1.879	1.700	1.858	1.822	2.005	2.043	3.881	2.438
COMMUNICATIONS	3.392	3.722	3.612	3.210	3.434	3.536	3.381	3.953	3.958	3.707
PUBLIC UTILITIES	1.093	1.193	1.269	1.249	1.201	1.230	1.250	1.299	1.358	1.284
WHOLESALE TRADE	6.067	6.248	6.239	5.837	6.098	5.671	5.982	6.177	5.771	5.900
RETAIL TRADE	19.961	22.224	22.923	20.755	21.466	20.601	22.698	23.470	23.442	22.553
FINANCE, INSURANCE, & REAL EST.	6.490	6.970	7.758	7.191	7.102	7.281	7.601	7.948	8.267	7.774
SERVICES	26.436	28.556	29.797	26.742	27.633	26.740	28.185	28.317	26.520	27.441
GOVERNMENT	48.718	50.764	49.644	49.554	49.670	50.100	50.937	49.927	51.993	50.739
FEDERAL	17.718	17.929	19.371	17.758	17.944	17.390	17.701	18.128	17.717	17.734
STATE	13.169	14.354	15.215	13.754	14.123	13.462	13.989	13.933	14.056	13.860
LOCAL	17.831	18.481	16.058	18.042	17.603	19.248	19.247	17.866	20.220	19.145
MISCELLANEOUS EMPLOYMENT	1.096	1.310	2.056	728	1.297	700	706	864	494	691
TOTAL	158.141	178.922	191.033	165.899	173.499	157.078	169.964	174.177	163.044	166.066

FORECAST PERIODS ARE: POPULATION (78:4 TO 81:4)

LABOR FORCE (79:1 TO 81:4)

NONAG EMPLOYMENT (79:2 TO 81:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4-1979:1 IS ESTIMATED.

TABLE I
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
POPULATION (TRENDED)	408.0	405.5	403.0	405.4	405.5	406.6	408.0	409.4	411.8	409.0
LABOR FORCE (CPS BASIS)	170.4	194.1	190.3	175.2	180.0	172.3	182.1	188.3	182.0	181.2
EMPLOYMENT (CPS BASIS)	149.5	162.3	172.0	156.1	160.0	147.7	162.9	171.0	162.6	161.1
UNEMPLOYMENT (CPS BASIS)	20.8	21.8	18.3	19.1	20.0	19.7	19.2	17.3	19.4	18.9
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	12.2	11.8	9.6	10.9	11.1	11.9	10.5	9.2	10.7	10.6

AGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	5.190	5.782	5.698	5.390	5.563	5.642	5.696	5.584	5.155	5.519
CONTRACT CONSTRUCTION	19.226	12.572	14.817	11.345	12.240	7.461	10.906	13.038	10.636	10.510
MANUFACTURING	8.778	11.922	16.091	9.587	11.595	7.800	11.338	15.669	9.950	11.189
LOGGING & SAWMILLS	903	2.024	2.151	1.656	1.684	971	2.293	2.384	1.803	1.863
PAPER & PULP PRODUCTS	1.168	1.197	1.190	750	1.076	1.066	1.109	1.155	1.126	1.114
MISC FOOD & KINDRED PRODUCTS	4.134	5.862	9.584	4.350	5.983	3.317	5.071	9.260	4.381	5.507
OTHER MANUFACTURING	2.573	2.339	3.166	2.831	2.852	2.446	2.864	2.870	2.640	2.705
TRANS. COMM. & PUBLIC UTILS	15.507	16.542	17.521	15.945	16.379	15.609	16.545	17.219	16.409	16.445
TRUCKING	2.050	2.147	2.257	1.879	2.083	1.813	2.039	2.235	2.109	2.049
WATER TRANSPORTATION	930	1.376	1.359	1.109	1.169	916	1.111	1.233	939	1.062
AIR TRANSPORTATION	4.228	4.431	4.371	4.565	4.524	4.475	4.563	4.811	4.425	4.568
OTHER TRANSPORTATION	3.227	3.067	3.375	2.913	3.146	2.812	3.041	3.099	3.186	3.034
COMMUNICATIONS	3.905	4.023	4.163	4.112	4.052	4.214	4.340	4.339	4.214	4.277
PUBLIC UTILITIES	1.267	1.493	1.496	1.367	1.406	1.379	1.451	1.503	1.487	1.455
WHOLESALE TRADE	5.531	5.743	5.988	5.621	5.721	5.289	5.736	5.849	5.839	5.678
RETAIL TRADE	21.638	23.197	24.243	23.431	23.127	22.879	23.707	24.087	23.489	23.541
FINANCE, INSURANCE, & REAL EST.	9.442	7.966	8.341	8.163	8.228	8.093	7.832	8.189	8.043	8.039
SERVICES	25.905	27.778	29.540	27.299	27.606	27.558	27.598	28.932	27.122	27.803
GOVERNMENT	51.761	53.061	49.427	54.945	52.299	54.886	55.863	51.413	55.536	54.424
FEDERAL	17.501	18.055	18.720	18.256	18.133	17.516	18.006	18.103	18.200	17.956
STATE	13.842	14.275	14.440	14.829	14.347	14.652	15.072	15.022	15.055	14.950
LOCAL	20.418	20.731	16.267	21.860	19.819	22.718	22.784	18.288	22.280	21.518
MISCELLANEOUS EMPLOYMENT	333	493	967	558	588	478	921	1.661	770	957
TOTAL	153.401	165.056	172.633	162.284	163.344	155.695	166.142	171.642	162.949	164.107

FORECAST PERIODS ARE: POPULATION (78:4 TO 81:4)

LABOR FORCE (79:1 TO 81:4)

NONAG EMPLOYMENT (79:2 TO 81:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4, 1979:1 IS ESTIMATED.

TABLE 1
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1980:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
POPULATION (TRENDED)	414.5	416.2	418.0	420.8	417.4	422.8	424.7	426.7	429.4	425.9
LABOR FORCE (CPS BASIS)	190.4	199.1	195.0	190.5	188.7	190.4	200.1	206.7	201.2	199.6
EMPLOYMENT (CPS BASIS)	159.1	158.9	177.2	169.9	168.8	167.6	178.4	187.5	179.1	178.1
UNEMPLOYMENT (CPS BASIS)	21.2	20.2	17.9	20.6	20.0	22.8	21.7	19.2	22.2	21.5
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	11.8	10.7	9.2	10.8	10.6	12.0	10.9	9.3	11.0	10.8

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	5.543	6.560	7.238	6.477	6.454	7.161	8.337	9.095	8.075	8.167
CONTRACT CONSTRUCTION	9.973	11.605	14.362	11.256	11.549	9.602	12.330	15.137	11.891	12.240
MANUFACTURING	9.075	11.272	15.803	9.844	11.499	9.088	11.322	16.020	10.025	11.613
LOGGING & SAWMILLS	1.224	1.936	2.004	1.401	1.641	966	1.802	1.968	1.410	1.537
PAPER & PULP PRODUCTS	1.119	1.110	1.159	1.147	1.134	1.167	1.180	1.244	1.235	1.207
MISC FOOD & KINDRED PRODUCTS	4.229	5.314	9.657	4.555	5.939	4.430	5.394	9.788	4.612	6.056
OTHER MANUFACTURING	2.504	2.912	2.983	2.741	2.785	2.524	2.946	3.019	2.768	2.814
TRANS. COMM. & PUBLIC UTILS	15.975	16.934	17.678	16.994	16.895	16.440	17.470	18.294	17.512	17.429
TRUCKING	2.117	2.077	2.269	2.142	2.151	2.144	2.102	2.296	2.163	2.176
WATER TRANSPORTATION	.832	1.085	1.257	1.022	1.049	.870	1.142	1.333	1.084	1.107
AIR TRANSPORTATION	4.134	4.644	5.027	4.528	4.583	4.357	4.907	5.342	4.773	4.845
OTHER TRANSPORTATION	3.396	3.341	3.227	3.505	3.367	3.466	3.413	3.304	3.579	3.441
COMMUNICATIONS	4.081	4.303	4.364	4.276	4.256	4.158	4.387	4.449	4.359	4.338
PUBLIC UTILITIES	1.415	1.484	1.535	1.520	1.488	1.446	1.517	1.570	1.554	1.522
WHOLESALE TRADE	5.804	5.944	5.940	5.931	5.880	5.877	5.914	6.009	5.991	5.948
RETAIL TRADE	22.780	24.057	25.235	24.779	24.213	23.551	25.377	26.622	26.182	25.433
FINANCE, INSURANCE, & REAL EST.	7.819	8.186	8.619	8.470	8.273	8.191	8.571	9.022	8.871	8.664
SERVICES	26.710	28.749	29.065	27.708	28.058	27.231	29.359	29.743	28.180	28.629
GOVERNMENT	55.385	55.768	52.338	56.197	54.972	56.811	57.755	54.481	57.409	56.614
FEDERAL	18.297	18.376	18.494	18.593	18.445	18.485	18.585	18.684	18.784	18.635
STATE	14.853	15.115	15.192	15.400	15.140	15.284	15.666	16.204	15.847	15.751
LOCAL	22.235	22.457	18.652	22.204	21.387	23.041	23.504	19.593	22.778	22.229
MISCELLANEOUS EMPLOYMENT	577	923	1,664	771	984	577	923	1,664	771	984
TOTAL	159.641	170.098	177.943	168.427	169.777	164.529	177.357	186.098	174.906	175.720

FORECAST PERIODS ARE: POPULATION (78:4 TO 81:4)
LABOR FORCE (79:1 TO 81:4)
NONAG EMPLOYMENT (79:2 TO 81:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4-1979:1 IS ESTIMATED.

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED, ANNUAL RATE)

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
WAGES & SALARIES	3.689	4.333	4.767	4.327	4.279	4.047	4.029	3.620	3.677	3.843
PLUS: OTHER LABOR INCOME	0.201	0.237	0.275	0.268	0.245	0.266	0.274	0.258	0.268	0.267
PLUS: PROPRIETORS' INCOME	0.161	0.179	0.202	0.204	0.187	0.214	0.232	0.209	0.206	0.215
PLUS: PROPERTY INCOME	0.284	0.306	0.323	0.335	0.312	0.333	0.331	0.333	0.337	0.334
PLUS: TRANSFER PAYMENTS	0.301	0.235	0.298	0.299	0.296	0.304	0.326	0.390	0.359	0.345
PLUS: RESIDENCE ADJUSTMENT	-0.654	-0.965	-1.153	-0.883	-0.914	-0.633	-0.632	-0.330	-0.285	-0.470
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.175	0.207	0.249	0.239	0.217	0.248	0.272	0.255	0.258	0.258
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	3.803	4.168	4.465	4.310	4.187	4.283	4.287	4.225	4.303	4.275

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FOOD AND BEVERAGES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENTERTAINMENT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOUSING	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANSPORTATION	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEDICAL CARE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OTHER GOODS & SVCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALL ITEMS	1.597	1.628	1.659	1.632	1.641	1.705	1.742	1.774	1.782	1.751

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	12.99	13.42	13.35	14.00	13.44	15.50	15.01	14.65	15.23	15.10
CONTRACT CONSTRUCTION	16.21	16.94	18.23	19.10	17.62	20.16	19.09	18.26	19.44	19.24
MANUFACTURING	7.82	7.68	7.89	8.03	7.85	8.32	8.66	9.35	10.56	9.22
WHOLESALE TRADE	8.12	8.70	9.00	8.33	8.54	8.62	8.83	8.91	8.36	8.68
RETAIL TRADE*	6.65	6.27	6.59	6.67	6.55	6.94	7.17	7.40	7.37	7.22

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

AC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1978:1 TO 1979:1.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:2 TO 81:4)

PRICES (79:3 TO 81:4)

EARNINGS (79:2 TO 81:4)

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED, ANNUAL RATE)

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
WAGES & SALARIES	3.761	3.565	3.547	3.672	3.636	3.793	3.827	3.959	4.207	3.946
PLUS: OTHER LABOR INCOME	0.280	0.261	0.266	0.268	0.269	0.279	0.299	0.316	0.333	0.307
PLUS: PROPRIETORS' INCOME	0.217	0.205	0.207	0.216	0.211	0.221	0.219	0.223	0.228	0.223
PLUS: PROPERTY INCOME	0.351	0.365	0.382	0.397	0.374	0.415	0.438	0.457	0.479	0.447
PLUS: TRANSFER PAYMENTS	0.333	0.351	0.382	0.369	0.359	0.344	0.357	0.374	0.389	0.366
PLUS: RESIDENCE ADJUSTMENT	-0.232	-0.215	-0.216	-0.219	-0.220	-0.225	-0.227	-0.227	-0.244	-0.231
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.277	0.252	0.251	0.252	0.258	0.275	0.288	0.309	0.329	0.300
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	4.432	4.290	4.316	4.451	4.370	4.553	4.625	4.793	5.063	4.759

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	1.546	1.581	1.594	1.612	1.583	1.578	1.57	1.597	1.620	1.593
FOOD AND BEVERAGES	2.115	2.211	2.248	2.294	2.217	2.385	2.42	2.464	2.509	2.446
ENTERTAINMENT	1.838	1.974	1.885	1.902	1.874	1.903	1.89	1.924	1.953	1.919
HOUSING	1.762	1.791	1.882	1.931	1.841	1.982	2.027	2.057	2.088	2.038
TRANSPORTATION	1.697	1.750	1.792	1.827	1.763	1.844	1.906	2.015	2.087	1.963
MEDICAL CARE	2.237	2.248	2.310	2.352	2.287	2.442	2.491	2.553	2.617	2.525
OTHER GOODS & SVCS	1.750	1.790	1.825	1.855	1.807	1.884	1.917	1.946	1.975	1.931
ALL ITEMS	1.900	1.843	1.909	1.950	1.875	1.996	2.037	2.093	2.133	2.065

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	15.87	14.60	14.07	15.67	15.05	17.48	15.38	16.67	16.41	16.49
CONTRACT CONSTRUCTION	18.52	17.34	17.38	19.07	18.24	19.01	19.07	18.84	19.07	19.00
MANUFACTURING	9.14	8.81	8.58	8.92	8.86	9.22	10.92	11.43	11.72	10.83
WHOLESALE TRADE	8.38	8.68	8.98	9.06	8.78	9.28	9.51	9.72	9.87	9.59
RETAIL TRADE*	7.05	7.36	7.05	7.56	7.26	7.39	8.26	8.66	8.92	8.31

*EXCEPT EATING & DRINKING PLACES

N=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1978:1 TO 1979:1.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:2 TO 81:4)
PRICES (79:3 TO 81:4)
EARNINGS (79:2 TO 81:4)

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$ SEASONALLY ADJUSTED, ANNUAL RATE)

	1979:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
WAGES & SALARIES	4.431	4.458	4.544	4.722	4.539	5.069	5.119	5.258	5.337	5.211
PLUS: OTHER LABOR INCOME	0.351	0.362	0.372	0.384	0.367	0.400	0.412	0.424	0.435	0.418
PLUS: PROPRIETORS' INCOME	0.243	0.243	0.252	0.260	0.249	0.273	0.277	0.287	0.296	0.283
PLUS: PROPERTY INCOME	0.559	0.571	0.592	0.616	0.582	0.641	0.667	0.695	0.725	0.682
PLUS: TRANSFER PAYMENTS	0.170	0.181	0.431	0.452	0.409	0.443	0.455	0.514	0.538	0.487
PLUS: RESIDENCE ADJUSTMENT	-0.262	-0.261	-0.263	-0.280	-0.266	-0.298	-0.296	-0.298	-0.313	-0.301
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.341	0.359	0.356	0.370	0.357	0.388	0.411	0.410	0.421	0.408
EQUALS: PERSONAL INCOME-RESIDENCE BASIS	5.342	5.394	5.573	5.785	5.524	6.140	6.223	6.470	6.659	6.373

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	1.642	1.661	1.681	1.702	1.672	1.725	1.751	1.777	1.805	1.765
FOOD AND BEVERAGES	2.561	2.621	2.683	2.744	2.652	2.800	2.853	2.905	2.957	2.879
ENTERTAINMENT	1.982	2.012	2.042	2.073	2.027	2.104	2.135	2.167	2.200	2.152
HOUSING	2.134	2.181	2.229	2.279	2.205	2.328	2.379	2.431	2.485	2.406
TRANSPORTATION	2.147	2.201	2.259	2.322	2.232	2.388	2.456	2.524	2.594	2.490
MEDICAL CARE	2.682	2.749	2.818	2.888	2.784	2.961	3.035	3.111	3.188	3.074
OTHER GOODS & SVCS	2.005	2.035	2.066	2.096	2.050	2.123	2.160	2.192	2.225	2.176
ALL ITEMS	2.180	2.228	2.277	2.327	2.253	2.379	2.430	2.483	2.536	2.457

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	17.38	15.93	18.42	17.18	17.23	17.26	16.51	20.40	18.03	18.05
CONTRACT CONSTRUCTION	19.04	19.21	18.86	19.72	19.21	20.77	20.96	20.57	21.48	20.95
MANUFACTURING	11.60	12.50	12.75	13.00	12.46	12.67	13.75	14.05	14.32	13.70
WHOLESALE TRADE	9.99	10.39	10.78	10.82	10.50	10.87	11.22	11.54	11.55	11.29
RETAIL TRADE*	9.30	9.37	9.74	10.00	9.60	10.35	10.52	10.88	11.15	10.73

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1979:1 TO 1979:1.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:2 TO 81:4)

PRICES (79:3 TO 81:4)

EARNINGS (79:2 TO 81:4)

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
CASH & DUE FROM BANKS	229.2	219.2	270.5	239.2	239.5	200.1	199.2	204.5	215.6	204.9
SECURITIES	413.5	485.1	510.7	482.6	473.0	456.7	466.6	509.4	478.9	480.4
LOANS & DISCOUNTS	792.6	855.6	913.3	957.4	879.7	981.9	1,051.5	1,122.3	1,148.7	1,076.2
OTHER ASSETS	79.9	81.4	88.6	92.3	85.5	101.3	119.9	120.1	120.4	115.4
TOTAL ASSET	1,515.1	1,641.3	1,783.2	1,771.5	1,677.8	1,750.1	1,837.3	1,956.3	1,963.8	1,876.9
DEMAND DEPOSITS	630.4	727.9	763.0	682.9	701.1	651.2	746.7	774.7	731.4	726.0
TIME DEPOSITS	708.3	709.2	817.4	848.8	771.1	847.9	821.3	901.9	953.0	881.0
OTHER LIABILITIES & CAPITAL	176.4	203.5	202.9	239.8	205.7	251.0	269.3	279.8	279.5	269.9
SAVINGS & LOAN ASSOCIATIONS -----										
DEPOSITS-BEGINNING OF QTR	158.4	168.3	178.7	188.0	173.5	190.7	196.9	217.8	218.7	206.0
NEW SAVINGS RECEIVED	54.3	54.1	54.1	46.9	52.3	55.3	61.8	71.7	50.5	59.9
WITHDRAWALS	46.4	47.9	48.9	46.5	47.4	51.1	53.3	56.9	56.7	54.5
CHANGE IN MORTGAGE PORTFOLIOS	1.5	11.9	11.0	3.5	7.0	3.5	10.8	11.7	7.3	8.3
NEW LENDING	10.8	23.0	23.4	25.3	20.6	17.5	27.4	32.4	32.5	27.5
LOAN MORTGAGE RATE (X)-SEATTLE	9.3	9.2	9.3	9.4	9.4	9.2	9.1	9.2	9.4	9.2

THE FORECAST PERIOD IS 1977:3 TO 1981:4.
ONLY FEDERALLY CHARTERED S&L'S ARE INCLUDED IN DATA.

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
CASH & DUE FROM BANKS	213.7	248.3	275.0	249.8	246.7	228.7	228.0	256.5	254.7	242.0
SECURITIES	437.3	465.2	508.9	514.0	481.4	500.1	581.6	613.1	597.1	573.0
LOANS & DISCOUNTS	1,170.3	1,244.3	1,286.0	1,242.2	1,235.7	1,222.7	1,266.0	1,344.3	1,340.2	1,293.3
OTHER ASSETS	130.3	131.9	128.0	127.0	129.3	130.1	134.7	137.3	139.8	135.5
TOTAL ASSETS	1,951.5	2,089.7	2,198.0	2,133.1	2,093.1	2,081.6	2,210.2	2,351.2	2,331.7	2,243.7
DEMAND DEPOSITS	666.8	733.6	788.5	709.3	724.5	666.2	707.5	800.1	762.9	734.2
TIME DEPOSITS	973.2	1,017.5	1,069.6	1,038.0	1,024.6	1,022.2	1,083.6	1,153.9	1,181.7	1,110.4
OTHER LIABILITIES & CAPITAL	311.6	338.6	339.9	385.8	344.0	393.2	419.1	397.2	387.1	399.2

SAVINGS & LOAN ASSOCIATIONS

DEPOSITS, BEGINNING OF YEAR	216.6	216.3	212.4	219.9	216.3	212.9	211.4	228.9	234.1	221.8
NEW SAVINGS RECEIVED	41.5	63.4	75.6	54.0	58.6	62.1	75.2	71.3	63.9	68.1
WITHDRAWALS	49.9	61.8	72.1	65.3	62.3	64.3	67.0	69.7	73.2	68.5
CHANGE IN MORTGAGE PORTFOLIOS	-1.8	14.0	-5.6	-2.6	1.0	-4.8	4.6	26.9	1.5	7.1
NEW LENDING	16.4	33.6	26.6	26.5	26.3	15.4	22.6	25.0	29.8	23.2
CONV MORTGAGE RATE (2)-SEATTLE	9.5	9.7	10.0	10.2	9.8	10.6	10.7	11.0	11.3	10.9

THE FORECAST PERIOD IS 1979:3 TO 1981:4.
ONLY FEDERALLY CHARTERED S&L'S ARE INCLUDED IN DATA.

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1980:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
CASH & DUE FROM BANKS	240.2	265.1	320.2	310.2	293.9	289.8	317.8	382.3	366.8	339.2
SECURITIES	628.2	660.4	793.3	684.8	669.2	678.3	722.3	776.3	740.0	734.2
LOANS & DISCOUNTS	1,329.3	1,339.5	1,431.2	1,462.9	1,419.2	1,473.3	1,554.8	1,626.1	1,604.5	1,564.7
OTHER ASSETS	143.7	145.2	151.0	154.5	148.6	160.6	161.0	164.2	168.1	163.5
TOTAL ASSETS	2,341.4	2,470.2	2,655.7	2,612.4	2,519.9	2,622.0	2,755.8	2,949.0	2,879.3	2,801.5
DEMAND DEPOSITS	750.4	861.3	928.9	872.7	853.3	854.6	980.6	1,059.0	991.7	971.5
TIME DEPOSITS	1,271.1	1,185.6	1,296.4	1,233.3	1,249.1	1,324.3	1,301.1	1,406.4	1,416.0	1,362.0
OTHER LIABILITIES & CAPITAL	319.9	423.3	430.4	416.5	417.5	443.1	474.2	483.5	471.5	468.1

SAVINGS & LOAN ASSOCIATIONS

DEPOSITS-BEGINNING OF QTR	228.4	234.5	239.0	251.0	238.3	248.2	257.3	262.5	275.2	260.8
NEW SAVINGS RECEIVED	75.6	73.4	78.5	69.2	74.2	82.9	80.5	86.7	75.4	81.4
WITHDRAWALS	72.9	72.6	70.2	75.8	72.9	77.6	79.4	79.1	85.0	80.0
CHANGE IN MORTGAGE PORTFOLIOS	0.3	7.9	5.3	6.0	4.8	-3.9	12.1	6.3	6.3	5.2
NEW LENDING	15.1	22.1	32.9	37.4	28.4	21.0	35.5	40.2	43.5	35.1
CONV MORTGAGE IE (Z)-SEATTLE	10.8	10.6	10.4	10.3	10.5	10.3	10.1	10.1	10.1	10.1

THE FORECAST PERIOD IS 1979:3 TO 1981:4.
ONLY FEDERALLY CHARTERED S&LS ARE INCLUDED IN DATA.

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January 1980

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enterprise

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**THE
ALASKA ECONOMIC
INFORMATION AND REPORTING SYSTEM**

**QUARTERLY REPORT
JANUARY 1980**

STATE OF ALASKA
JAY S. HAMMOND, GOVERNOR

CHARLES R. WEBBER, COMMISSIONER
Department of Commerce and
Economic Development

RICHARD H. EAKINS, DIRECTOR
Division of Economic Enterprise

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PRINCIPAL ECONOMIST
CHIEF OF RESEARCH

FORWARD

In this report we present and discuss our current CONTROL or "best judgement" forecast of the Alaska economy. While this is an econometric forecast in the sense that it has been made with the AEIRS quarterly econometric model, it is not solely the product of that model. Where it seemed appropriate we have judgementally adjusted the forecast to take account of recent information on the pace of economic activity, and have also fine tuned the model where preliminary testing suggested the need. This is standard practice and reflects the fact that economic model building is still an imperfect art.

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SUMMARY

This issue of the AEIRS **Quarterly Report** extends the forecast horizon through 1982.

Despite the general dullness of Alaska's overall economic performance in 1979, it is reasonable to presume that the post-pipeline letdown has finally bottomed out. With interest rates now widely forecasted to be on the decline, with a countercyclical fiscal 1981 State government budget in the offing and with business confidence buoyed some by the December Beaufort Sea oil lease sale, 1980 can be expected to show an upturn in jobs and real income. An additional element pushing the State economy ahead in this forecast is a projected D2 settlement early this year. While continued weakness in private construction will dampen the forecasted recovery, all things considered, we anticipate an increase in nonagricultural employment in 1980 of 2.1 percent, followed by gains of 4.2 percent in 1981, and 5.1 percent in 1982. An important point is that these gains are not premised on startup during the period of Alpetco, the Pacific Alaska LNG facility, or the Northwest Alaska gas pipeline project. Section III discusses a special simulation of the AEIRS model in which these three projects proceed on their respective nominal schedules.

Startling news on the inflation front! The Anchorage all urban consumer price index was up only 0.2 percent in November from its September level, an annual rate of increase of only 1.4 percent. Almost certainly, this dramatic dropoff in inflation is a product of the economic slowdown experienced this year in Anchorage. Unfortunately, such a low rate of inflation cannot be maintained. With the national all urban consumer price index still forging ahead at double digit annual rates, November's respite is likely to be temporary. Continued crude oil price boosts from OPEC, together with some catchup as Alaska firms are forced to pass on higher wholesale prices of products produced outside Alaska, are now projected to push the Anchorage all urban index ahead at an 11.2 percent rate in 1980, and at 9.7 and 8.7 percent rates in 1981 and 1982, respectively. Further contributing to the inflation scene this year is an anticipated mini-gold rush.

With gold prices pushing \$700 per ounce, a small flood of independent prospectors can be expected to begin arriving before the spring thaw unless gold prices fall back below about \$500 an ounce. If a D2 settlement is reached in the next three months some of the larger mining companies will dust off contingency plans and expand their Alaska exploration efforts.

At no time since this REPORT was first published has there been greater uncertainty surrounding the estimates of future economic activity. The Iranian crisis, the Soviet invasion of Afghanistan, skyrocketing gold prices and unrest in World energy markets have potential consequences of such magnitude that there is at least a fifty percent chance that the future will differ significantly from this forecast. Results of the special simulation of Alpetco, Pacific Alaska LNG, and the gasline project can be viewed as an upper limit to short term growth possibilities. A realistic lower limit cannot be defined. It depends too heavily on the shape of World events and on the responses to these events both in Washington and in Juneau.

**THE ALASKA ECONOMY
PERFORMANCE SUMMARY
1976 to 1982**

	History			Forecast			
	1976	1977	1978	1979	1980	1981	1982
Nonagricultural Employment	173,499	166,066	163,191	164,648	168,181	175,279	184,254
Percent Change	+6.5	-4.3	-1.6	+0.9	+2.1	+4.2	+5.1
Resident Personal Income <u>1/</u>	4,195	4,314	4,415	4,696	5,544	6,356	7,395
Percent Change	+18.9	+2.8	+2.3	+6.4	+18.1	+14.6	+16.3
Anchorage CPI (1967=1.000) <u>3/</u>	1,641	1,751	1,875	2,074	2,306	2,529	2,749
Percent Change	+6.5	+6.7	+7.1	+10.6	+11.2	+9.7	+8.7
Bank Deposits <u>2/</u>	1472.2	1607.0	1749.1	1810.2	2040.6	2351.3	2643.9
Percent Change	+12.9	+9.2	+8.8	+3.5	+12.7	+15.2	+12.4
Savings and Loan Deposits <u>2/</u>	173.5	206.0	216.3	220.6	225.5	253.5	289.2
Percent Change	+22.0	+18.7	+5.0	+2.0	+2.2	+12.4	+14.1

1/ Billions of dollars. Revised.

2/ Millions of dollars. Average of January, April, July, and October end of month deposits for S&L's; average of March, June, September, and December end of month deposits for banks.

3/ Index for all urban workers.

Note: Nonagricultural employment in 1976 and 1977 exceeds present official Department of Labor estimates by the amount of an anticipated upward revision in local government employment.

II. CONTROL FORECAST

Indications are that in 1979 a small gain of about one percent in the number of nonagricultural jobs (people working for other people) was partly or totally offset by job losses among the self-employed. Were it not for job gains under the federal government's Comprehensive Employment and Training Act program (CETA), total nonagricultural employment would have unquestionably declined.

There were two primary causes of economic weakness in 1979: (1) unexpectedly high inflation that was not fully offset by higher money incomes and thus eroded real after tax incomes and real buying power (real resident personal income is estimated to have declined by 3.8 percent in 1979); and (2) record high interest rates, tight money and uncertainty over Alaska's economic future which together produced an exceptional slowdown in construction activity. In addition, a relatively austere fiscal 1980 State government budget failed to pick up the slack. Strong showings by the tourist industry and by the fishing industry were simply not enough to offset the weakness elsewhere.

Despite the general dullness of last year's economic performance, it does appear that Alaska's post-pipeline letdown has finally bottomed out. With declining interest rates and a countercyclical fiscal 1981 state government budget now in the offing, 1980 should show a distinct improvement over 1979, particularly so if business confidence improves. Of no small importance in lifting confidence is the fact that the Beaufort Sea oil lease sale was held on schedule. That sale has signaled a willingness on the part of the State and the federal government to work together to achieve the development of Alaska's resources.

EMPLOYMENT IN 1980

The employment outlook for 1980 is good, primarily because 1979's negative pressures will weaken. The following factors should combine to produce a net economic gain next year by almost any measure.

Mortgage loans will be available at subsidized interest rates both from the Alaska Housing Finance Corporation and from those private financial institutions which agree to offer such loans in return for their receiving additional State government deposits. While much of this money will undoubtedly be used to purchase existing homes, at least some should go into home improvements and new construction. By providing the wherewithall to draw down the present large inventory of unsold homes, both programs will help to stimulate residential construction activity in 1981 and 1982.

The State government fiscal 1981 budget will likely be somewhat more stimulative than its immediate predecessor. The present control forecast assumes that State government spending will increase by 3.5 percent in fiscal 1981, after adjustment for inflation.

Because of widespread contractual lags in the adjustment of wage rates to inflation, nominal wage gains in 1980 should be substantial and should, therefore, prevent a further erosion of before tax buying power. A probable reduction in federal income taxes will help to increase real disposable income and real buying power (although the possibility of a substitute value added tax being passed dims this prospect somewhat). For the record, AEIRS presently forecasts a 6.2 percent increase in real resident personal income in 1980. This should be viewed alongside the 3.8 percent decline estimated to have occurred in 1979.

Federal plans call for the drilling of five new exploratory wells in the National Petroleum Reserve - Alaska (PET-4). A further boost will come from field operations at Prudhoe Bay associated with the effort to increase the flow of oil in the trans-Alaska pipeline to 1.5 million barrels per day, and keep it there until late in the decade.

There will also be some negative factors at work in 1980. While the present forecast assumes that a D2 bill will be signed early in the year, there are clearly no guarantees. If a bill is not signed early, hard rock mining activity will remain moribund despite high metals prices and growing concern over U.S. dependence on imports of key minerals. If gold prices stay above \$500.00 an ounce, a surge of independent prospecting can be expected, with or without a D2 bill. The large companies, however, will wait for a lands settlement.

A second negative factor at work in 1980 is the oversupply of commercial space and residential housing units in Anchorage and Fairbanks. Statewide, the real dollar value of residential and nonresidential building permits will probably increase next year, but only because of the \$150 million office/hotel complex planned for Juneau.

Finally, the CETA program has been partially cut by the Carter Administration. This could result in a direct loss of up to 2,000 jobs compared to 1979. A loss of 1,500 fulltime equivalent jobs is presently forecasted by AEIRS, with the losses concentrated in services, and in State and local government.

The present CONTROL forecast of the Alaska economy for 1980 reconciles these factors into a 2.1 percent annual average gain in nonagricultural employment over 1979. This figure is lower than the 2.8 percent gain projected last October partly because the estimate of base year employment (1979) has been increased and partly because the negative factors listed above are given greater weight than they had been before.

One important change from the October forecast is the projection of slightly declining employment in retail trade and services. A projected loss of 600 CETA jobs in services accounts for the downward revision in services employment. The previous forecast simply did not reflect the fact that CETA workers hired through Native Regional Corporation prime sponsors show up as services employment in "membership organizations." In the case of trade, the flat 1980 performance now forecasted is premised on the belief that 1979's weakness in real disposable income has had a delayed impact on the larger employers and hence on nonagricultural employment. While over 60 percent of the Alaska establishments in the retail trade industry are unincorporated enterprises, it is the larger incorporated

enterprises that provide the bulk of the nonagricultural retail trade jobs. (Nonagricultural employment excludes the self employed.)

Mining employment includes both hard rock activity and oil and gas field operations. The least certain element in the present 1980 forecast is the surge in mining activity shown this year. During the summer months almost 1,600 more mining workers are projected than were reported as employed in the summer of 1979. About one-half of this surge is in oil and gas operations (PET-4 and work at Prudhoe Bay, mostly) with the remainder in hard rock mining. The key assumptions which produce a surge of 800 workers in hard rock mining are: (1) A compromise D2 bill is passed early in the year; and (2) gold prices remain near or above \$500 per ounce. In essence we are projecting a mini gold rush next summer.

For sure, many things could go wrong with such a forecast. For now, however, a mini gold rush appears to be a reasonable possibility, if not in 1980, then in 1981. At the very least one can expect to see a genuine flood of independent prospectors next year. For the most part, however, the individual independent prospector will not be reflected in the official data. For the predicted surge in "official" mining employment to occur, some of the major companies will need to get involved in renewed exploration. Our expectation is that gold will be the principal lure but by no means the only one.

EMPLOYMENT IN 1981 and 1982

The consensus opinion among Congress watchers is that a D2 bill will be signed sometime in 1980. This forecast assumes that to be the case. Premised on the early 1980 passage of D2 legislation, the surge in hard rock mining operations forecasted for 1980 is projected to continue into 1981 and 1982. Given additional projected gains in mining employment as the result of oil field operations in the Beaufort Sea, off Kodiak Island, in the Gulf of Alaska, and at Prudhoe Bay, the present forecast shows more than twice as many mining jobs in 1982 as in 1979. While gains of this magnitude may seem startling, they are not out of line with real world events. The combination of very high minerals prices, the removal of uncertainty over the status of Alaska lands, national concern over supplies of strategic minerals, and three planned oil lease sales can be expected to produce an unprecedented surge in Alaska mining activity over the next three years.

Other factors which are likely to be at work in 1981 and 1982, and which have been incorporated into this forecast include reduced interest rates, lower inflation, continued availability of credit, strong public spending, and greater commercial and residential construction activity.

What is not factored into the present CONTROL forecast is significant activity on major construction projects such as the Northwest Alaska gasline, the Alpecto refinery, and the Pacific Alaska LNG plant. All three of these projects still face considerable obstacles. Section III of this REPORT discusses a special simulation of the AEIRS model in which all three are assumed to proceed on their present nominal schedules. As one might expect, the result is a boom in 1982 of near oil pipeline magnitudes.

On an industry by industry basis, the annual average rates of employment growth shown in the present CONTROL forecast for 1981 and 1982 are: mining, 35.2 percent; construction, 11.5 percent; manufacturing, 1.9 percent; transportation, communications and public

utilities, 2.3 percent; wholesale trade, 2.3 percent; retail trade, 2.5 percent; finance, insurance and real estate, 6.9 percent; services, 1.5 percent; federal government, 1.5 percent; State government, 3.7 percent; and local government, 3.5 percent.

Total nonagricultural employment in the CONTROL forecast grows by 4.2 percent in 1981 and by 5.1 percent in 1982.

INFLATION OUTLOOK

Is the Phillips curve* alive and well and living in Alaska? At an annual rate the September 1979 to November 1979 percent gain in the all urban Anchorage consumer price index was a nearly unbelievable 1.4 percent! That is not a misprint, at least not here. Nor is it the product of a single component index dropping precipitously. On a component by component basis the two month percentage gains posted by the Anchorage CPIU were (at annual rates): food and beverages, 4.1 percent; housing, 0.0 percent; apparel and upkeep, -9.7 percent; transportation, 8.3 percent; medical care, 2.9 percent; entertainment, 4.4 percent; and other goods and services, 1.2 percent.

In contrast to the Anchorage CPIU's 1.4 percent gain (annual rate) recorded between September and November, the national average CPIU gained 12.4 percent at an annual rate for the same two month period. While we have not made an exhaustive historical comparison of Anchorage and U.S. average inflation rates, it seems likely that the November difference between the two is unprecedented.

It would be irresponsible to project a continuation of such price stability in Anchorage. November's low posted rate of inflation is almost certainly a reflection of 1979's economic slowdown in Anchorage. Increasing crude oil prices and a recovery next year in the Alaska economy should renew the upward pressure on the Anchorage CPIU. A complete cutoff of Iranian oil from World markets, caused either by internal Iranian disruptions or by overt American action, would provide ample reason for OPEC members to raise their crude oil prices even further. With domestic petroleum prices moving toward complete decontrol, and with the dollar at the point where (seemingly) anything can cause it to depreciate against other currencies, an extra round of crude oil price increases will rather quickly begin to be felt by the American consumer.

These considerations have prompted an upward revision in the rate of increase in the Anchorage all urban consumer price index (CPIU), forecasted for 1980 and 1981. In effect, the November Anchorage inflation performance is viewed here as a one shot phenomenon, presaging some catchup. On an annual average basis the Anchorage CPIU is now projected to jump 11.2 percent in 1980, and a further 9.7 percent in 1981. For the record, the 1982 increase is presently projected to be 8.7 percent. At this stage, however, the 1982 rate of inflation is anybody's guess, given the magnitude of the possible consequences of major events, (a national election, the Soviet invasion of Afghanistan, and the Iranian crisis are three such events). The 8.7 percent inflation rate forecasted for 1982 presumes reasonable stability in World affairs and a sustained national effort to control inflation.

*The Phillips curve is a supposed inverse cause-effect relationship between the rate of the unemployment and the rate of inflation.

The text table compares the presently estimated 1979 and the presently forecasted 1980, 1981 and 1982 annual average rates of consumer price inflation for Anchorage to the rate of increase experienced during the most recent twelve month period.

ANCHORAGE CONSUMER PRICE INFLATION*
(Percent)

	Nov. 1978 to Nov. 1979	Percent Change in Annual Average			
		1979	1980	1981	1982
Apparel and Upkeep	4.3	2.2	7.1	6.4	6.7
Food and Beverages	10.2	10.9	10.0	7.9	7.1
Entertainment	3.7	2.5	5.7	6.2	6.1
Housing	10.2	11.7	8.4	9.1	8.3
Transportation	12.1	11.4	24.6	15.8	12.5
Medical Care	7.8	9.2	9.1	10.4	10.4
Other Goods and Services	7.3	7.0	6.4	6.1	6.1
All Items	9.8	10.6	11.2	9.7	8.7

*As measured by the percent change in the Anchorage Consumer Price Index for all urban workers.

Consumer price indexes for Fairbanks are now being published bi-monthly by the U.S. Bureau of Labor Statistics. Through October the all urban Fairbanks consumer price index had increased at a 12.4 percent annual rate. To date, insufficient data are available for detailed analysis. One can, however, expect similar rates of inflation in Anchorage and Fairbanks.

FINANCIAL SECTOR

Adjusted for inflation, combined time and demand deposits at Alaska's commercial and mutual savings banks declined 7.3 percent between September 30, 1978 and September 30, 1979. Over the same period, real savings and loan deposits declined 2.4 percent. This dismal performance reflects the 3.7 percent decline in real resident personal income estimated by AEIRS to have occurred during that period.

In nominal terms, bank deposits rose \$38.8 million or 2.1 percent, and savings and loan deposits \$15.4 million or 7.5 percent. Neither of these gains were large enough to offset inflation. When real deposit flows are weak, financial institutions restrict lending. Alaska's banks have done just that. On September 30, 1979 bank loans and discounts stood \$23.8

million below the year earlier figure, a nominal decline of 1.9 percent and a real decline of 10.9 percent. The loan-deposit ratio fell from .692 to .665.

The present AEIRS forecast does not expect this pattern to be repeated in 1980. The Alaska economy has bottomed out in our estimation. Real personal income of residents is expected to post a healthy gain in 1980. In addition, State government has shown a willingness to inject deposits into the financial system. (Recent State injections of funds were not reflected in the September 30, 1979 data.) Based on these growth projections, bank deposits are projected to grow by 12.7 percent in 1980 and by 15.2 percent and 12.4 percent in 1981 and 1982, respectively. All of these projected gains are higher than the forecasted rate of increase in Anchorage consumer prices. Because savings and loan associations depend relatively heavily on personal as opposed to business deposits, savings and loan associations will not likely see the recovery until nearly mid 1980. By the end of the year, however, they should be sharing in the recovery. On an annual average basis, deposits at Alaska's savings and loan associations are forecasted to grow by 2.2 percent in 1980, and by 12.4 and 14.1 percent in 1981 and 1982, respectively.

National trends will largely dictate interest rate behavior in Alaska. Data Resources, Incorporated, one of the nation's leading forecasting teams, expects the national economy to slow sufficiently by next summer to lower domestic short term interest rates by about 100 basis points (one percentage point) and domestic long term interest rates by about 30 basis points from fourth quarter peaks. Their forecast for selected interest rates is given in the text table along with the AEIRS forecast of the Seattle conventional mortgage rate. (A proxy for Alaska mortgage rates.)

SELECTED INTEREST RATES (Percent)

	Calendar Quarters								
	History					Forecast			
	78:3	78:4	79:1	79:2	79:3	79:4	80:1	80:2	80:3
90-day U.S. Treasury Bills	7.31	8.57	9.38	9.38	9.67	11.95	11.75	10.62	9.37
90-day Euro-dollar Rate	8.70	11.09	10.87	10.63	11.66	15.05	14.34	12.76	11.15
Moody's AAA Corporates	8.75	9.03	9.29	9.39	9.29	10.60	10.45	10.37	10.24
State & Local AAA General Obligations	5.63	5.68	5.81	5.72	5.73	6.49	6.45	6.37	6.27
Conventional Mortgage Rate, Seattle	9.96	10.15	10.57	10.67	11.13	11.87	12.00	12.00	11.96

ACKNOWLEDGEMENT:

Forecasts of all but the Seattle Mortgage rate were obtained from the December 1979 **Data Resources Review**.

The AEIRS forecast of mortgage rates shows these rates reaching 12.0 percent and staying there for most of the year, even though other long term interest rates decline by next summer. The persistence in mortgage rates is expected because lending institutions have been paying record high rates for lendable funds through the issuance of instruments such as jumbo negotiable certificates of deposit and six month money market certificates. Financial institutions will be reluctant to lower their lending rates until a shift occurs away from such high interest rate sources of funds.

III. A BOOM IN 1982?

There are a number of large multi-year construction projects being planned for Alaska. Three in particular are the Northwest Alaska gas pipeline project, Alpetco, and the Pacific Alaska LNG plant. While one or more of these projects may be postponed or scrapped, all are sufficiently far along that a look at their short term economic impact is in order. The following table gives direct construction employment as it might be on these projects if they all proceed on essentially their present schedules. While the schedules used here may be optimistic, and while the direct employment numbers are no more than approximations, both are roughly consistent with what has been announced by the respective project managers.

DIRECT CONSTRUCTION EMPLOYMENT THREE MAJOR PROJECTS

Calendar Quarters

	80:1	80:2	80:3	80:4	81:1	81:2	81:3	81:4	82:1	82:2	82:3	82:4
Casline	0	0	0	0	0	50	100	100	1,000	4,000	7,000	5,500
Pac. Ak. LNG	0	0	50	50	100	550	1,200	750	300	800	1,500	750
Alpetco	0	75	150	300	600	1,300	1,800	1,250	1,000	1,650	2,300	2,250
Total	0	75	200	350	700	1,900	3,100	2,100	2,300	6,450	10,800	8,500

The critical feature brought out in the text table is the fact that all three projects may be employing their peak construction workforces in the summer of 1982. This raises the possibility of a construction boom in Alaska in 1982. When combined with what already looks to be a relatively strong 1982 construction season (produced by lower inventories of housing and commercial space, lower interest rates, and growth in bottomfish and tourism, to say nothing of 1982 being the first year of a two year state capital budget), strains of near oil pipeline magnitude could be placed on the Alaska economy.

The AEIRS econometric model was used to simulate the induced effects of the added stream of construction workers shown in the above text table. The following table entitled "Boom vs Control" summarizes the results. The additional 12,180 jobs generated in 1982 are made up of 7,010 direct construction jobs and 5,170 induced jobs in other sectors. During the third quarter of 1982, construction employment peaks at almost 33,000 jobs, a level last seen in 1976 when summer construction employment peaked at 38,454 jobs. In this sense the combined effect of the three planned construction projects is to produce a boom of near oil pipeline magnitude.

To a certain extent, the additional 2.4 percentage points of inflation shown in the text table for 1982 is an educated guess. Econometric models can only crudely capture the inflationary pressures generated by such a surge in economic activity. Between 1973 and 1976, the period of TAPS construction in Alaska, the Anchorage consumer price index rose an average of 2.2 percentage points more per year than the overall U.S. consumer price index. Without

BOOM VS. CONTROL

	Control Forecast	Boom in 1982	Diff.
1980			
Personal Income of Residents <u>1/</u>	5.544	5.557	0.013
Nonagricultural Employment	168,181	168,599	418
Inflation Rate <u>2/</u>	11.2	11.2	---
1981			
Personal Income of Residents <u>1/</u>	6.356	6.586	0.230
Nonagricultural Employment	175,279	180,610	5,331
Inflation Rate <u>2/</u>	9.7	9.9	0.2
1982			
Personal Income of Residents <u>1/</u>	7.395	8.026	0.631
Nonagricultural Employment	184,254	196,434	12,180
Inflation Rate <u>2/</u>	8.7	11.1	2.4

1/ Billions of dollars.

2/ Percent. As measured by the percent change in the Anchorage consumer price index for all urban workers.

TAPS, the Anchorage index probably would have maintained its historical pattern of increasing slower than the U.S. average. Similar differential price pressures can be expected in 1982 if the gasline, Alpetco, and the Pacific Alaska facility proceed on schedule.

IV. SOME IMPORTANT UNCERTAINTIES

At no time since this **REPORT** was first published has there been more uncertainty surrounding the forecast. National and World events of potentially enormous consequence have precipitated major changes in energy supplies and in commodity prices. These in turn have prompted political and economic responses whose effects, quite frankly, cannot be captured by any model or forecasting technique developed to date, by anybody.

The revolution in Iran and the subsequent taking of American hostages has dramatized the sensitivity of Western political and economic conditions to events in the Middle East. The short term effects of the Iranian crisis have been to drive crude oil prices to levels two to three times the levels of just one year ago, and to generate a wholly unexpected increase in gold prices (approaching \$700 per ounce in New York at this writing).

As long as the Iranian crisis remains unsettled, indeed, as long as the Western World perceives a serious possibility of further disruptions in the Middle East, commodity prices in general can be expected to remain high, with crude oil prices and gold prices particularly sensitive to such uncertainty.

Alaska is not exempt from the fallout from World events. Concern in Washington over potential political instability in the Middle East and elsewhere will have an important impact on such legislation as the D2 settlement and the windfall oil profits tax. The major shakeup in World oil markets which has occurred and which continues to unfold has already enhanced the profitability of one major Alaska project (Alpetco) and could play a role in deciding the fate of other projects such as the Northwest gasoline. The incredible rise in metals prices (particularly gold prices) seen in the past few months has set the stage for a surge in Alaska mineral exploration that would have been unimaginable a year ago. Finally, in terms of potential immediate impact on Alaska nothing surpasses the coming legislative session in Juneau. There is simply no way to tell just how big a spending spree we will go on. One hopes that a reasonable spending ceiling will be imposed, but that remains to be seen.

Yet another uncertainty facing Alaskans is a possible sharp decline in fresh salmon prices this year. Because the Japanese appear to be carrying heavy inventories of salmon and because the dollar has recently appreciated against the Japanese yen, and, finally, because another record run of salmon in parts of the State is anticipated, salmon prices could reach very low levels in 1980. While steps are being taken to develop alternative markets for Alaska salmon, only modest progress should be expected. Of course, if salmon prices drop enough, a market will be found. The problem is to find a market for salmon priced at or near 1979 levels.

Given Alaska's role as a major storehouse of crude oil and minerals, it would seem that most of the risks are on the upside; that if the forecast presented here errs it does so by being too conservative. That is a dangerous attitude. The U.S. Congress is not likely to allow Alaskans to get rich at the expense of the rest of the country. While the outlook on balance is excellent, the potential for a flexing of federal regulatory muscle is very real. Alaskans should never forget that for all intents and purposes we will prosper only at the pleasure of the rest of the country.

We believe that the forecast presented in this **REPORT** is a responsible look ahead at how these uncertainties will, on balance, play themselves out. But we must add that as only one possibility among many, it is given a lower probability of unfolding than any of its predecessors. Particular in 1981 and 1982 there is at least a fifty percent chance that the truth will ultimately diverge quite sharply from the version laid out here. Results of the special simulation of Alpecto, Pacific Alaska LNG, and gasline construction can be viewed as an upper limit to short term growth possibilities. A realistic lower limit cannot be defined. It depends too heavily on the shape of world events and on the responses to these events both in Washington and in Juneau.

APPENDIX

Historical employment and income data published in the following tables have been revised in accordance with revisions released by the Alaska Department of Labor, and by the U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE I
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
POPULATION (TRENDED)	394.0	400.0	408.3	409.5	402.9	410.7	411.8	413.0	410.5	411.5
LABOR FORCE (CPS BASIS)	154.2	171.7	181.9	164.3	168.0	164.0	180.2	181.7	174.0	175.0
EMPLOYMENT (CPS BASIS)	138.6	157.2	169.7	150.6	154.0	146.9	164.1	168.4	156.6	159.0
UNEMPLOYMENT (CPS BASIS)	15.6	14.5	12.2	13.7	14.0	17.1	16.1	13.4	17.4	16.0
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	10.1	8.4	6.7	8.3	8.4	10.4	8.9	7.4	10.0	9.2

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	3,651	3,744	4,300	4,163	3,965	4,717	5,079	5,231	4,807	4,959
CONTRACT CONSTRUCTION	23,156	32,760	38,454	26,562	30,233	18,953	22,583	21,310	15,336	19,546
MANUFACTURING	7,402	10,500	14,022	9,400	10,331	8,035	11,487	14,579	9,480	10,895
LOGGING & SAWMILLS	1,107	2,106	2,451	2,117	1,945	1,643	2,575	2,444	1,663	2,081
PAPER & PULP PRODUCTS	1,199	1,188	1,280	1,126	1,198	1,176	1,427	1,238	1,150	1,248
MISC FOOD & KINDRED PRODUCTS	2,927	4,667	7,521	3,752	4,717	2,972	4,974	8,133	4,154	5,058
OTHER MANUFACTURING	2,169	2,539	2,770	2,405	2,471	2,244	2,511	2,764	2,513	2,508
TRANS., COMM., & PUBLIC UTILS	15,164	15,846	16,840	14,967	15,704	14,280	14,706	18,194	16,934	16,029
TRUCKING	3,010	3,004	3,217	3,034	3,066	2,583	2,441	2,630	2,118	2,443
WATER TRANSPORTATION	1,136	1,358	1,535	1,293	1,331	1,030	1,180	1,832	1,254	1,324
AIR TRANSPORTATION	4,402	4,847	5,009	4,314	4,643	4,079	4,449	4,597	4,365	4,373
OTHER TRANSPORTATION	2,131	1,722	2,198	1,867	1,980	1,822	2,005	3,883	3,881	2,898
COMMUNICATIONS	3,392	3,722	3,612	3,210	3,484	3,536	3,381	3,953	3,958	3,707
PUBLIC UTILITIES	1,093	1,193	1,269	1,249	1,201	1,230	1,250	1,299	1,358	1,284
WHOLESALE TRADE	6,067	6,248	6,239	5,837	6,098	5,671	5,982	6,177	5,771	5,900
RETAIL TRADE	19,961	22,224	22,923	20,755	21,466	20,601	22,698	23,470	23,442	22,553
FINANCE, INSURANCE, & REAL EST.	6,490	6,970	7,758	7,191	7,102	7,281	7,601	7,948	8,267	7,774
SERVICES	25,436	28,556	28,797	26,742	27,633	26,740	28,185	26,478	26,520	26,981
GOVERNMENT	48,718	50,764	49,644	49,554	49,670	50,100	50,937	49,927	51,993	50,739
FEDERAL	17,718	17,929	18,371	17,758	17,944	17,390	17,701	18,128	17,717	17,734
STATE	13,169	14,354	15,215	13,754	14,123	13,462	13,989	13,933	14,056	13,860
LOCAL	17,831	18,481	16,058	18,042	17,603	19,248	17,856	20,220	19,145	
MISCELLANEOUS EMPLOYMENT	1,096	1,310	2,056	728	1,298	699	706	863	494	691
TOTAL	158,141	178,922	191,033	165,899	173,499	157,077	169,964	174,177	163,044	166,066

FORECAST PERIODS ARE: POPULATION (78:4 TO 82:4)
LABOR FORCE (79:1 TO 82:4)
NONAG EMPLOYMENT (79:3 TO 82:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4, 1979:1 IS ESTIMATED.

TABLE 1
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
POPULATION (TRENDED)	408.0	405.5	403.0	405.4	405.5	406.6	408.0	409.6	412.3	409.1
LABOR FORCE (CPS BASIS)	170.4	184.1	190.3	175.2	180.0	172.3	182.1	186.5	179.9	180.2
EMPLOYMENT (CPS BASIS)	149.6	162.3	172.0	156.1	160.0	147.7	162.9	169.5	160.9	160.3
UNEMPLOYMENT (CPS BASIS)	20.8	21.8	18.3	19.1	20.0	19.7	19.2	16.9	19.0	18.7
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	12.2	11.8	9.6	10.9	11.1	11.9	10.5	9.1	10.6	10.5

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	5,380	5,782	5,698	5,390	5,563	5,642	5,903	6,044	5,527	5,779
CONTRACT CONSTRUCTION	10,226	12,572	14,817	11,345	12,240	7,461	9,846	12,440	9,799	9,886
MANUFACTURING	8,325	11,922	16,091	9,587	11,481	7,800	13,339	16,107	10,047	11,773
LOGGING & SAWMILLS	903	2,024	2,151	1,656	1,684	971	2,034	2,106	1,632	1,686
PAPER & PULP PRODUCTS	1,168	1,197	1,190	750	1,076	1,066	1,248	1,318	1,198	1,208
MISC FOOD & KINDRED PRODUCTS	3,681	5,862	9,584	4,350	5,869	3,317	6,840	9,770	4,587	6,129
OTHER MANUFACTURING	2,573	2,839	3,166	2,831	2,852	2,446	3,017	2,912	2,629	2,751
TRANS. COMM. & PUBLIC UTILS	15,507	16,542	17,521	15,945	16,379	15,609	16,726	16,957	16,276	16,392
TRUCKING	2,050	2,147	2,257	1,879	2,083	1,813	1,761	1,918	2,046	1,885
WATER TRANSPORTATION	830	1,376	1,359	1,109	1,169	916	1,292	1,307	1,122	1,159
AIR TRANSPORTATION	4,228	4,431	4,871	4,565	4,524	4,475	5,041	5,015	4,564	4,774
OTHER TRANSPORTATION	3,227	3,067	3,375	2,913	3,146	2,812	2,987	3,066	3,126	2,998
COMMUNICATIONS	3,905	4,028	4,163	4,112	4,052	4,214	4,224	4,225	4,033	4,174
PUBLIC UTILITIES	1,267	1,493	1,496	1,367	1,406	1,379	1,421	1,426	1,386	1,403
WHOLESALE TRADE	5,531	5,743	5,988	5,621	5,721	5,289	5,679	5,804	5,787	5,640
RETAIL TRADE	21,638	23,197	24,161	23,431	23,107	22,879	24,098	24,217	23,338	23,633
FINANCE, INSURANCE, & REAL EST.	8,442	7,966	8,341	8,163	8,228	8,093	8,208	8,598	8,407	8,326
SERVICES	25,805	27,778	29,540	27,299	27,606	27,558	28,658	28,705	27,296	28,054
GOVERNMENT	51,761	53,061	49,427	55,085	52,334	54,886	55,814	51,408	55,037	54,286
FEDERAL	17,501	18,055	18,720	18,396	18,168	17,516	17,816	18,103	17,900	17,834
STATE	13,842	14,275	14,440	14,829	14,347	14,652	15,041	15,022	15,057	14,943
LOCAL	20,418	20,731	16,267	21,860	19,819	22,718	22,957	18,283	22,082	21,510
MISCELLANEOUS EMPLOYMENT	515	493	967	159	534	478	920	1,345	770	878
TOTAL	153,130	165,056	172,551	162,025	163,191	155,695	168,991	171,625	162,283	164,648

FORECAST PERIODS ARE: POPULATION (78:4 TO 82:4)
LABOR FORCE (79:1 TO 82:4)
NONAG EMPLOYMENT (79:3 TO 82:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4, 1979:1 IS ESTIMATED.

TABLE I
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1980:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
POPULATION (TRENDED)	414.8	417.5	419.9	423.0	418.8	425.3	428.1	430.6	433.8	429.5
LABOR FORCE (CPS BASIS)	177.4	188.3	194.2	189.2	187.3	189.5	200.3	206.6	201.4	199.4
EMPLOYMENT (CPS BASIS)	156.7	167.9	176.5	168.8	167.5	166.8	178.2	187.3	179.2	177.9
UNEMPLOYMENT (CPS BASIS)	20.8	20.3	17.7	20.4	19.8	22.7	22.1	19.3	22.2	21.6
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	11.7	10.8	9.1	10.8	10.6	12.0	11.0	9.3	11.0	10.8

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	6,048	6,738	7,598	7,291	6,919	8,526	9,623	10,461	10,338	9,737
CONTRACT CONSTRUCTION	7,634	11,695	14,382	10,727	11,110	9,086	11,783	14,630	11,565	11,766
MANUFACTURING	8,686	12,368	16,524	10,253	11,958	8,846	12,464	16,701	10,346	12,089
LOGGING & SAWMILLS	1,101	1,851	2,061	1,603	1,654	1,079	1,849	2,042	1,554	1,631
PAPER & PULP PRODUCTS	1,255	1,325	1,307	1,154	1,260	1,223	1,329	1,351	1,223	1,281
MISC FOOD & KINDRED PRODUCTS	3,849	6,299	10,167	4,762	6,269	4,050	6,379	10,297	4,819	6,387
OTHER MANUFACTURING	2,481	2,893	2,989	2,734	2,774	2,494	2,907	3,010	2,750	2,790
TRANS, COMM, & PUBLIC UTILS	15,934	17,065	17,902	17,081	16,996	16,363	17,444	18,261	17,435	17,376
TRUCKING	2,020	2,142	2,221	2,213	2,149	2,231	2,261	2,291	2,303	2,271
WATER TRANSPORTATION	899	1,164	1,473	1,186	1,181	940	1,213	1,527	1,224	1,226
AIR TRANSPORTATION	4,383	4,776	5,093	4,700	4,738	4,533	4,939	5,242	4,820	4,883
OTHER TRANSPORTATION	3,194	3,326	3,358	3,475	3,338	3,263	3,378	3,418	3,533	3,398
COMMUNICATIONS	4,066	4,217	4,272	4,075	4,158	3,986	4,175	4,262	4,088	4,128
PUBLIC UTILITIES	1,371	1,440	1,485	1,433	1,432	1,411	1,478	1,521	1,466	1,469
WHOLESALE TRADE	5,738	5,776	5,869	5,848	5,808	5,782	5,814	5,910	5,893	5,850
RETAIL TRADE	21,826	23,533	24,546	23,865	23,442	22,326	24,109	25,184	24,515	24,033
FINANCE, INSURANCE, & REAL EST.	8,311	8,425	8,859	8,711	8,577	8,663	8,825	9,310	9,173	8,992
SERVICES	27,174	28,373	28,864	27,123	27,884	27,366	29,019	29,335	27,440	28,290
GOVERNMENT	54,946	55,642	51,985	55,765	54,584	56,348	57,507	54,185	56,922	56,240
FEDERAL	17,897	18,196	18,294	18,293	18,170	18,085	18,385	18,484	18,484	18,360
STATE	14,853	15,115	15,192	15,400	15,140	15,284	15,666	16,204	15,847	15,751
LOCAL	22,195	22,331	18,498	22,071	21,274	22,979	23,456	19,496	22,591	22,130
MISCELLANEOUS EMPLOYMENT	577	923	1,348	,771	905	577	923	1,348	771	905
TOTAL	156,875	170,538	177,877	167,436	168,181	163,883	177,511	185,323	174,398	175,279

FORECAST PERIODS ARE: POPULATION (78:4 TO 82:4)
LABOR FORCE (79:1 TO 82:4)
NONAG EMPLOYMENT (79:3 TO 82:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4, 1979:1 IS ESTIMATED.

TABLE I
STATE OF ALASKA
POPULATION, LABOR FORCE, & EMPLOYMENT

POPULATION AND LABOR FORCE (THOUSANDS)

	1982:1	1982:2	1982:3	1982:4	ANNUAL AVG. 1982
POPULATION (TRENDED)	436.3	439.4	442.0	445.1	440.7
LABOR FORCE (CPS BASIS)	201.4	214.0	221.1	214.7	212.8
EMPLOYMENT (CPS BASIS)	176.8	190.0	200.2	190.6	189.4
UNEMPLOYMENT (CPS BASIS)	24.6	24.0	20.9	24.1	23.4
UNEMPLOYMENT RATE (PERCENT, CPS BASIS)	12.2	11.2	9.4	11.2	11.0

NONAGRICULTURAL WAGE & SALARY EMPLOYMENT

MINING	11,830	12,909	13,463	12,704	12,726
CONTRACT CONSTRUCTION	9,679	14,296	18,219	13,124	13,829
MANUFACTURING	9,066	12,822	17,132	10,657	12,419
LOGGING & SAWMILLS	1,125	1,960	2,157	1,659	1,725
PAPER & PULP PRODUCTS	1,316	1,440	1,462	1,314	1,383
MISC FOOD & KINDRED PRODUCTS	4,112	6,475	10,454	4,888	6,482
OTHER MANUFACTURING	2,513	2,946	3,059	2,796	2,829
TRANS, COMM, & PUBLIC UTILS	16,676	17,837	18,723	17,924	17,790
TRUCKING	2,262	2,290	2,318	2,329	2,300
WATER TRANSPORTATION	968	1,252	1,583	1,275	1,270
AIR TRANSPORTATION	4,645	5,079	5,408	4,994	5,031
OTHER TRANSPORTATION	3,341	3,477	3,525	3,651	3,498
COMMUNICATIONS	4,019	4,227	4,332	4,171	4,187
PUBLIC UTILITIES	1,442	1,511	1,557	1,503	1,503
WHOLESALE TRADE	5,835	5,872	5,968	5,958	5,908
RETAIL TRADE	22,982	24,876	26,036	25,406	24,825
FINANCE, INSURANCE, & REAL EST.	9,136	9,323	9,853	9,724	9,509
SERVICES	27,670	29,504	29,992	28,252	28,854
GOVERNMENT	57,439	58,697	55,385	58,382	57,476
FEDERAL	18,085	18,385	18,484	18,484	18,360
STATE	15,590	15,980	16,529	16,164	16,066
LOCAL	23,763	24,333	20,372	23,733	23,050
MISCELLANEOUS EMPLOYMENT	585	935	1,366	781	917
TOTAL	170,896	187,071	196,137	182,911	184,254

FORECAST PERIODS ARE: POPULATION (78:4 TO 82:4)
LABOR FORCE (79:1 TO 82:4)
NONAG EMPLOYMENT (79:3 TO 82:4)

NOTE: PAPER & PULP EMPLOYMENT FOR 1978:4, 1979:1 IS ESTIMATED.

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED, ANNUAL RATE)

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
WAGES & SALARIES	4.081	4.318	4.390	4.344	4.283	4.189	3.960	3.590	3.636	3.844
PLUS: OTHER LABOR INCOME	0.220	0.233	0.253	0.271	0.244	0.284	0.284	0.277	0.296	0.285
PLUS: PROPRIETORS' INCOME	0.180	0.190	0.200	0.224	0.199	0.236	0.237	0.230	0.240	0.236
PLUS: PROPERTY INCOME	0.283	0.294	0.301	0.306	0.296	0.310	0.314	0.314	0.313	0.313
PLUS: TRANSFER PAYMENTS	0.300	0.284	0.289	0.293	0.291	0.323	0.337	0.360	0.346	0.342
PLUS: RESIDENCE ADJUSTMENT	-0.867	-0.939	-0.942	-0.910	-0.915	-0.605	-0.521	-0.392	-0.372	-0.473
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.188	0.196	0.208	0.224	0.204	0.238	0.240	0.223	0.228	0.232
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	4.008	4.186	4.283	4.304	4.195	4.499	4.372	4.156	4.231	4.314

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FOOD AND BEVERAGES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENTERTAINMENT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOUSING	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRANSPORTATION	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MEDICAL CARE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OTHER GOODS & SVCS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALL ITEMS	1.597	1.628	1.658	1.682	1.641	1.705	1.742	1.774	1.782	1.751

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	12.99	13.42	13.35	14.00	13.44	15.50	15.01	14.65	15.23	15.10
CONTRACT CONSTRUCTION	16.21	16.94	18.23	19.10	17.62	20.16	19.09	18.26	19.44	19.24
MANUFACTURING	7.82	7.68	7.89	8.03	7.85	8.32	8.66	9.35	10.56	9.22
WHOLESALE TRADE	8.12	8.70	9.00	8.33	8.54	8.62	8.83	8.91	8.36	8.68
RETAIL TRADE*	6.65	6.27	6.59	6.67	6.55	6.94	7.17	7.40	7.37	7.22

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1979:1 TO 1979:2.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:3 TO 82:4)

PRICES (79:4 TO 82:4)

EARNINGS (79:3 TO 82:4)

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED ANNUAL RATE)

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
WAGES & SALARIES	3.670	3.576	3.605	3.653	3.626	3.688	3.684	3.857	4.055	3.821
PLUS: OTHER LABOR INCOME	0.315	0.312	0.322	0.329	0.320	0.332	0.343	0.341	0.346	0.341
PLUS: PROPRIETORS' INCOME	0.248	0.253	0.263	0.277	0.260	0.271	0.272	0.225	0.231	0.250
PLUS: PROPERTY INCOME	0.319	0.326	0.338	0.351	0.334	0.367	0.382	0.404	0.423	0.394
PLUS: TRANSFER PAYMENTS	0.345	0.346	0.379	0.363	0.358	0.344	0.350	0.372	0.387	0.363
PLUS: RESIDENCE ADJUSTMENT	-0.274	-0.255	-0.253	-0.254	-0.259	-0.204	-0.206	-0.227	-0.242	-0.220
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.236	0.222	0.219	0.216	0.223	0.229	0.229	0.267	0.285	0.253
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	4.385	4.336	4.436	4.502	4.415	4.568	4.595	4.705	4.914	4.696

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	1.546	1.581	1.594	1.612	1.583	1.578	1.579	1.642	1.674	1.618
FOOD AND BEVERAGES	2.115	2.211	2.248	2.294	2.217	2.385	2.425	2.485	2.539	2.458
ENTERTAINMENT	1.838	1.874	1.885	1.902	1.874	1.903	1.896	1.927	1.956	1.920
HOUSING	1.762	1.791	1.882	1.931	1.841	1.982	2.027	2.093	2.124	2.056
TRANSPORTATION	1.687	1.750	1.792	1.822	1.763	1.844	1.906	1.995	2.111	1.964
MEDICAL CARE	2.237	2.248	2.310	2.352	2.287	2.442	2.491	2.499	2.561	2.498
OTHER GOODS & SVCS	1.758	1.790	1.825	1.855	1.807	1.884	1.917	1.952	1.981	1.934
ALL ITEMS	1.800	1.843	1.909	1.950	1.875	1.996	2.037	2.103	2.160	2.074

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	15.15	14.73	14.60	15.67	15.05	16.68	17.39	17.38	16.61	17.02
CONTRACT CONSTRUCTION	18.28	18.12	17.84	18.66	18.22	18.67	18.73	19.38	18.91	18.92
MANUFACTURING	9.11	8.94	8.60	8.80	8.86	9.19	9.45	10.86	11.66	10.29
WHOLESALE TRADE	8.38	8.68	8.98	9.06	8.78	9.28	9.57	9.77	9.95	9.64
RETAIL TRADE*	7.05	7.36	7.05	7.56	7.26	7.39	7.51	8.68	9.06	8.16

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1979:1 TO 1979:2.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:3 TO 82:4)

PRICES (79:4 TO 82:4)

EARNINGS (79:3 TO 82:4)

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED, ANNUAL RATE)

	1980:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
WAGES & SALARIES	4.338	4.567	4.710	4.809	4.606	5.101	5.240	5.419	5.500	5.315
PLUS: OTHER LABOR INCOME	0.356	0.369	0.381	0.392	0.374	0.406	0.419	0.433	0.444	0.426
PLUS: PROPRIETORS' INCOME	0.238	0.244	0.252	0.259	0.248	0.267	0.273	0.281	0.289	0.277
PLUS: PROPERTY INCOME	0.481	0.499	0.515	0.531	0.506	0.546	0.563	0.581	0.603	0.573
PLUS: TRANSFER PAYMENTS	0.369	0.385	0.434	0.456	0.411	0.446	0.462	0.520	0.546	0.494
PLUS: RESIDENCE ADJUSTMENT	-0.254	-0.269	-0.275	-0.291	-0.272	-0.306	-0.314	-0.315	-0.329	-0.316
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.302	0.335	0.336	0.343	0.329	0.386	0.416	0.419	0.430	0.413
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	5.225	5.459	5.681	5.812	5.544	6.073	6.227	6.499	6.623	6.356

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	1.702	1.727	1.750	1.772	1.738	1.802	1.833	1.864	1.896	1.849
FOOD AND BEVERAGES	2.607	2.674	2.737	2.795	2.703	2.845	2.892	2.939	2.987	2.916
ENTERTAINMENT	1.985	2.015	2.045	2.076	2.030	2.107	2.139	2.171	2.203	2.155
HOUSING	2.156	2.204	2.252	2.302	2.228	2.352	2.404	2.457	2.511	2.431
TRANSPORTATION	2.257	2.414	2.519	2.601	2.448	2.695	2.793	2.884	2.971	2.836
MEDICAL CARE	2.626	2.691	2.758	2.827	2.726	2.898	2.971	3.045	3.121	3.009
OTHER GOODS & SVCS	2.011	2.041	2.072	2.103	2.057	2.134	2.166	2.199	2.232	2.183
ALL ITEMS	2.216	2.280	2.337	2.390	2.306	2.446	2.501	2.557	2.613	2.529

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	16.75	18.59	19.56	17.59	18.12	16.74	19.54	21.69	18.49	19.12
CONTRACT CONSTRUCTION	19.00	19.93	19.87	19.81	19.65	20.98	21.86	21.74	21.66	21.56
MANUFACTURING	12.00	12.33	12.66	13.22	12.55	13.32	13.68	14.02	14.63	13.91
WHOLESALE TRADE	10.15	10.65	11.18	11.34	10.83	11.47	11.87	12.20	12.19	11.93
RETAIL TRADE*	9.39	9.72	10.05	10.34	9.88	10.65	10.94	11.27	11.57	11.11

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1979:1 TO 1979:2.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:3 TO 82:4)

PRICES (79:4 TO 82:4)

EARNINGS (79:3 TO 82:4)

TABLE II
STATE OF ALASKA
INCOME, PRICES, AND WAGES

INCOME (BILLIONS OF \$, SEASONALLY ADJUSTED, ANNUAL RATE)

	1982:1	1982:2	1982:3	1982:4	ANNUAL AVG. 1982
WAGES & SALARIES	5.863	6.131	6.386	6.477	6.214
PLUS: OTHER LABOR INCOME	0.460	0.478	0.497	0.511	0.487
PLUS: PROPRIETORS' INCOME	0.298	0.304	0.314	0.323	0.310
PLUS: PROPERTY INCOME	0.627	0.653	0.680	0.709	0.667
PLUS: TRANSFER PAYMENTS	0.509	0.527	0.593	0.622	0.563
PLUS: RESIDENCE ADJUSTMENT	-0.349	-0.360	-0.362	-0.374	-0.361
LESS: EMPLOYEE CONTRIBUTIONS SOC INS	0.445	0.488	0.496	0.511	0.485
EQUALS: PERSONAL INCOME, RESIDENCE BASIS	6.963	7.246	7.611	7.758	7.395

CONSUMER PRICE INDICES-ANCHORAGE (1967=1.000)

APPAREL AND UPKEEP	1.926	1.956	1.987	2.019	1.972
FOOD AND BEVERAGES	3.042	3.097	3.150	3.203	3.123
ENTERTAINMENT	2.236	2.270	2.304	2.339	2.287
HOUSING	2.559	2.607	2.657	2.707	2.633
TRANSPORTATION	3.060	3.148	3.234	3.320	3.190
MEDICAL CARE	3.199	3.279	3.361	3.445	3.321
OTHER GOODS & SVCS	2.265	2.299	2.334	2.369	2.317
ALL ITEMS	2.667	2.721	2.776	2.831	2.749

AVERAGE HOURLY EARNINGS (DOLLARS, SEASONALLY ADJUSTED)

MINING	16.50	20.42	23.89	19.31	20.03
CONTRACT CONSTRUCTION	22.87	23.78	23.60	23.46	23.43
MANUFACTURING	14.70	15.07	15.42	16.07	15.32
WHOLESALE TRADE	12.18	12.45	12.68	12.59	12.47
RETAIL TRADE*	11.87	12.15	12.47	12.77	12.32

*EXCEPT EATING & DRINKING PLACES

NA=NOT AVAILABLE

NC=NOT CALCULATED

INCOME DATA ARE PRELIMINARY FOR 1979:1 TO 1979:2.

WAGES & SALARIES INCLUDES MILITARY.

CPI'S ARE FOR ALL URBAN WORKERS

FORECAST PERIODS ARE: INCOME (79:3 TO 82:4)

PRICES (79:4 TO 82:4)

EARNINGS (79:3 TO 82:4)

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1976:1	1976:2	1976:3	1976:4	ANNUAL AVG. 1976	1977:1	1977:2	1977:3	1977:4	ANNUAL AVG. 1977
CASH & DUE FROM BANKS	229.2	219.2	270.5	239.2	239.5	200.1	199.2	204.5	215.6	204.9
SECURITIES	413.5	485.1	510.7	482.6	473.0	466.7	466.6	509.4	478.9	480.4
LOANS & DISCOUNTS	792.6	855.6	913.3	957.4	879.7	981.9	1,051.5	1,122.3	1,148.9	1,076.2
OTHER ASSETS	79.9	81.4	88.6	92.3	85.5	101.3	119.9	120.1	120.4	115.4
TOTAL ASSETS	1,515.1	1,641.3	1,783.2	1,771.5	1,677.8	1,750.1	1,837.3	1,956.3	1,963.8	1,876.9
DEMAND DEPOSITS	630.4	727.9	763.0	682.9	701.1	651.2	746.7	774.7	731.4	726.0
TIME DEPOSITS	708.3	709.9	817.4	848.8	771.1	847.9	821.3	901.9	953.0	881.0
OTHER LIABILITIES & CAPITAL	176.4	203.5	202.9	239.8	205.7	251.0	269.3	279.8	279.5	269.9

SAVINGS & LOAN ASSOCIATIONS

DEPOSITS, BEGINNING OF QTR	158.9	168.3	178.7	188.0	173.5	190.7	196.9	217.8	218.7	206.0
NEW SAVINGS RECEIVED	54.3	54.1	54.1	46.9	52.3	55.3	61.8	71.9	50.5	59.9
WITHDRAWALS	46.4	47.9	48.9	46.5	47.4	51.1	53.3	56.9	56.7	54.5
CHANGE IN MORTGAGE PORTFOLIOS	1.6	11.9	11.0	3.5	7.0	3.5	10.8	11.7	7.3	8.3
NEW LENDING	10.8	23.0	23.4	25.3	20.6	17.5	27.4	32.4	32.5	27.5
CONV MORTGAGE RATE (%) - SEATTLE	9.5	9.2	9.3	9.4	9.4	9.2	9.1	9.2	9.4	9.2

THE FORECAST PERIOD IS 1979:4 TO 1982:4.

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1978:1	1978:2	1978:3	1978:4	ANNUAL AVG. 1978	1979:1	1979:2	1979:3	1979:4	ANNUAL AVG. 1979
CASH & DUE FROM BANKS	213.7	248.3	275.0	249.8	246.7	228.7	228.0	272.4	238.1	241.8
SECURITIES	437.3	465.2	508.9	514.0	481.4	500.1	581.6	694.5	611.3	596.9
LOANS & DISCOUNTS	1,170.3	1,244.3	1,286.0	1,242.2	1,235.7	1,222.7	1,266.0	1,262.2	1,266.5	1,254.3
OTHER ASSETS	130.3	131.8	128.0	127.0	129.3	130.1	134.7	136.5	135.4	134.2
TOTAL ASSETS	1,951.5	2,089.7	2,198.0	2,133.1	2,093.1	2,081.6	2,210.2	2,365.7	2,251.2	2,227.2
DEMAND DEPOSITS	666.8	733.6	788.5	709.3	724.5	666.2	707.5	762.3	739.4	718.8
TIME DEPOSITS	973.2	1,017.5	1,069.6	1,038.0	1,024.6	1,022.2	1,083.6	1,134.6	1,125.0	1,091.4
OTHER LIABILITIES & CAPITAL	311.6	338.6	339.9	385.8	344.0	393.2	419.1	468.8	386.8	417.0
SAVINGS & LOAN ASSOCIATIONS										
DEPOSITS, BEGINNING OF QTR	216.6	216.3	212.4	219.9	216.3	212.9	211.4	228.3	229.8	220.6
NEW SAVINGS RECEIVED	41.5	63.4	75.6	54.0	58.6	62.1	75.2	74.0	62.6	68.5
WITHDRAWALS	49.9	61.8	72.1	65.3	62.3	64.3	67.0	76.1	75.5	70.7
CHANGE IN MORTGAGE PORTFOLIOS	-1.8	14.0	-5.6	-2.6	1.0	-4.8	4.6	-2.2	-3.9	-1.6
NEW LENDING	16.4	33.6	28.6	26.5	26.3	15.4	22.6	17.5	24.0	19.9
CONV MORTGAGE RATE (%) - SEATTLE	9.5	9.7	10.0	10.2	9.8	10.6	10.7	11.1	11.9	11.0

THE FORECAST PERIOD IS 1979:4 TO 1982:4.

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1980:1	1980:2	1980:3	1980:4	ANNUAL AVG. 1980	1981:1	1981:2	1981:3	1981:4	ANNUAL AVG. 1981
CASH & DUE FROM BANKS	225.5	254.1	309.9	298.3	271.9	280.0	307.5	372.2	358.5	329.6
SECURITIES	606.0	636.4	708.5	694.7	661.4	721.4	739.8	793.3	746.6	750.2
LOANS & DISCOUNTS	1,291.0	1,383.9	1,442.3	1,424.9	1,385.6	1,420.8	1,538.3	1,628.9	1,636.5	1,556.1
OTHER ASSETS	137.3	140.2	147.3	151.2	144.0	156.7	158.2	162.8	167.3	161.3
TOTAL ASSETS	2,259.8	2,414.5	2,607.9	2,569.1	2,462.9	2,578.9	2,743.8	2,957.2	2,908.8	2,797.2
DEMAND DEPOSITS	735.4	856.9	931.1	872.7	849.0	847.6	972.5	1,052.7	985.7	964.6
TIME DEPOSITS	1,105.0	1,117.0	1,248.4	1,296.1	1,191.6	1,312.6	1,319.4	1,442.1	1,472.8	1,386.7
OTHER LIABILITIES & CAPITAL	419.5	440.7	428.4	400.3	422.2	418.8	451.9	462.4	450.4	445.9

SAVINGS & LOAN ASSOCIATIONS

DEPOSITS, BEGINNING OF QTR	220.4	221.4	223.6	236.5	225.5	235.9	247.8	256.8	273.7	253.5
NEW SAVINGS RECEIVED	74.4	73.9	79.3	69.3	74.2	82.2	80.6	87.0	75.3	81.3
WITHDRAWALS	76.8	75.2	69.9	73.6	73.8	74.0	75.4	74.2	80.5	76.0
CHANGE IN MORTGAGE PORTFOLIOS	-8.8	-3.0	4.0	0.3	-1.9	-0.5	14.7	15.1	6.3	8.9
NEW LENDING	8.1	20.1	25.3	30.4	21.0	14.6	30.5	36.1	39.9	30.3
CONV MORTGAGE RATE (%) - SEATTLE	12.0	12.0	12.0	11.6	11.9	11.4	11.0	10.8	10.7	11.0

THE FORECAST PERIOD IS 1979:4 TO 1982:4.

TABLE III
STATE OF ALASKA
SELECTED FINANCIAL BALANCES & FLOWS
(MILLIONS OF DOLLARS)

COMMERCIAL & MUTUAL SAVINGS BANKS

	1982:1	1982:2	1982:3	1982:4	ANNUAL AVG. 1982
CASH & DUE FROM BANKS	331.6	368.9	448.0	428.1	394.2
SECURITIES	759.4	782.6	839.2	777.2	789.6
LOANS & DISCOUNTS	1,646.0	1,782.3	1,882.4	1,883.8	1,798.6
OTHER ASSETS	174.7	176.2	180.6	183.6	178.8
TOTAL ASSETS	2,911.8	3,110.0	3,350.3	3,272.7	3,161.2
DEMAND DEPOSITS	962.2	1,114.5	1,215.8	1,142.2	1,108.7
TIME DEPOSITS	1,471.4	1,471.7	1,594.9	1,602.9	1,535.2
OTHER LIABILITIES & CAPITAL	478.2	523.7	539.6	527.6	517.3

SAVINGS & LOAN ASSOCIATIONS

DEPOSITS, BEGINNING OF QTR	272.7	284.0	291.8	308.4	289.2
NEW SAVINGS RECEIVED	90.1	89.1	97.0	83.2	89.8
WITHDRAWALS	83.1	85.6	84.9	93.2	86.7
CHANGE IN MORTGAGE PORTFOLIOS	3.0	16.8	16.7	6.9	10.8
NEW LENDING	22.9	38.4	44.3	47.3	38.2
CONV MORTGAGE RATE (%) - SEATTLE	10.5	10.5	10.5	10.5	10.5

THE FORECAST PERIOD IS 1979:4 TO 1982:4.

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THE
ALASKA ECONOMIC
INFORMATION AND REPORTING SYSTEM

QUARTERLY REPORT
APRIL 1980

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INTRODUCTION

This issue of the AEIRS **QUARTERLY REPORT** departs from tradition by omitting the updated forecast of employment and income. Instead, this REPORT concentrates more fully on a description and analysis of today's inflation, its causes, and the outlook for the longer term. One of the highlights of the analysis is a critical examination of the monetarist, government deficit, and excess demand explanations of the recent inflation experience. The extent to which each fails to account for this experience is noted and an alternative explanation is offered.

In the second paper published in the REPORT an attempt is made to lay out a framework for the analysis of proposed public subsidies to economic development projects in Alaska. Subsidies are defined and distinguished from public investments. The point is made that Alaska development projects requiring a permanent subsidy in excess of induced revenue are, in fact, oil dependent and, as such, may do little or nothing to provide an alternative to petroleum development as an economic base for Alaska. This leads to an introductory discussion of the feasibility of stimulating permanent economic growth through the use of temporary subsidies. Because the issue of public subsidies is extremely sensitive the paper diligently avoids making specific recommendations apart from a call for more organized formal research into the economics of Alaska development in general, and subsidized development in particular.

The July 1980 issue of the AEIRS **QUARTERLY REPORT** will revert to the established format and present an updated forecast of Alaska economic activity.

I. INFLATION TODAY

The public is well aware of the fact that double digit increases in consumer prices have plagued the United States economy for an extended period of time. In this section both the national and the State experience is documented and analysed. Evidence is presented which suggests that several of the more popular explanations for today's inflation are less than credible. Finally, a tentative look is taken at the inflation outlook for the next two years.

RECENT INFLATION - U.S.

The bare facts are that over the past year and one-half the rate of consumer price inflation in the United States as a whole has accelerated well into double digit figures (Table 1). In January and February 1980, the all items, all urban consumer price index for the country as a whole (CPIU-US) increased at an 18.0 percent average annual rate. Speculation as to whether or not inflation is "out of control" has surfaced in a number of respected publications.

Shelter and energy price changes receive a combined weight of approximately 38 percent in the determination of the U.S. average all items, all urban consumer price index (CPIU-US). The weight on shelter prices alone is 29 percent, while that on energy prices is 8.5 percent.

A good way to appreciate the relative impact of shelter and energy price inflation on the performance of the all items CPIU-US is to consider the portion of the all items increase accounted for solely by shelter and energy price increases. For the year ended July 1979, shelter and energy price increases accounted for 57.2 percent of the increase in the CPIU-US. Since July 1979 (through February 1980), this figure averaged 65.8 percent. To put this in perspective, if all prices always increased at the same rate, shelter and energy price increases would account for only 38 percent of the total increase.

RECENT INFLATION - ALASKA

While recent Alaska inflation rates have been high, they have not been quite as high as those for the U.S. as a whole. Over the most recent twelve month period for which data are available (see Table II) the Anchorage and Fairbanks All Urban Consumer Price Indexes rose by 10.1 percent and 10.2 percent, respectively. The U.S. increase for the same period was 14.1 percent. Just as in the country at large, Alaska inflation has been paced by increases in shelter and energy prices.

The slower pace of inflation in Alaska was not an "across-the-board" phenomenon, but rather reflected a much lower rate of increase (relative to the U.S. average) in housing and transportation prices, the two most heavily weighted components of the all items, all urban consumer price indexes for Anchorage and Fairbanks. In other words, while shelter (a component of housing) and energy prices set the inflation pace both in Alaska and in the country at large, they set a slower pace in Alaska. This almost certainly reflects special demand-supply factors in the State, in particular, the relative oversupply of residential housing and the general weakness of the Anchorage and Fairbanks economies in 1979.

TABLE I
Recent Rates of Inflation
(percent, annual rate)

	July '78 Thru July '79	Aug. 1979	Sept. 1979	Oct. 1979	Nov. 1979	Dec. 1979	Jan. 1980	Feb. 1980
U.S. Average								
All Items	11.3	12.7	12.7	11.4	11.4	14.0	18.2	17.8
Shelter	13.6	21.0	18.2	22.4	22.4	18.1	23.9	15.6
Energy	29.1	45.9	37.7	14.0	1.2	25.3	69.6	81.5
All Items Except Shelter & Energy	7.7	4.2	6.8	6.0	7.7	10.5	8.5	10.1
Anchorage								
All Items	10.0		18.0		1.2		13.3	
Shelter	13.0		20.1		(-1.8)		21.5	
Energy	19.7		83.0		0.6		20.8	
All items Except Energy & Shelter	6.4		8.0		3.6		5.8	

TABLE II
Consumer Price Inflation*
Most Recent Twelve Months
(percent)

	U.S.¹	Anchorage²	Fairbanks¹
Apparel and Upkeep	6.5	5.3	-1.7
Food and Beverages	7.3	7.7	5.4
Entertainment	8.0	5.3	6.8
Housing	16.2	10.6	10.9
Transportation	22.5	14.6	17.1
Medical Care	10.9	8.2	13.5
Other Goods and Services	8.4	8.7	7.8
All Items	14.1	10.1	10.2
Memo:			
Shelter	18.3	11.5	11.7
Energy	46.6	36.4	34.2

*As measured by the All Urban Consumer Price Index

1/ February 1979 through February 1980

2/ January 1979 through January 1980

INFLATION AND INTEREST RATES

Rising rates of inflation drive up interest rates by causing borrowers and lenders to revise upward their expectations of future inflation rates. Money is lent at interest rates that reflect both borrower and lender **expectations** as to what the rate of inflation will be during the period of time the loan is outstanding.

The real (inflation adjusted) interest rate on bonds, promissory notes, bank deposits and other certificates of debt is approximately equal to the difference between the nominal interest rate and the rate of price inflation over the period of time the debt is outstanding.¹ If the rate of inflation exceeds the nominal interest rate, the real rate of interest is negative. In such a case, nominal interest payments are insufficient to offset the inflation-caused decline in the value of the currency used to repay the debt.

Since late 1972 many high grade bonds and short term securities have offered negative real yields. If one assumes that lenders would not intentionally contract for a negative real interest rate, the implication is that for eight years lenders have systematically and persistently underestimated the future rate of inflation. Table III documents this experience for the case of 90-day U.S. Treasury bills, four to six month commercial paper, and three to five year U.S. government bonds.

Between the first quarter of 1972, and the fourth quarter of 1979, the real interest rate on 90-day U.S. Treasury Bills was negative in twenty-six of thirty-two quarters, that on four to six month commercial paper was negative in twenty-three of thirty-two quarters, and that on four to six year U.S. government notes was negative in twenty-eight of thirty-two quarters. Over the period 1972:1 through 1979:4 their respective mean real interest rates were -1.84 percent, -1.15 percent and -2.08 percent. In contrast, the mean real interest rates posted by these same three securities over the preceeding eight year period (1964:1 through 1971:4) were 1.22 percent, 1.96 percent and 0.62 percent, respectively.

What can explain the existence of persistently negative real interest rates in markets dominated by sophisticated lenders? One hypothesis is that lenders have simply been that wrong, that long, about inflation. It is certainly a fact that many economic forecasters (including the President's Council of Economic Advisors) have consistently underestimated inflation throughout most of the 1970's. A look at past inflation forecasts made by the President's Council of Economic Advisors shows that between 1972 and 1979, their forecast was below the subsequent economy wide rate of inflation in five of eight years, above it in two years, and essentially correct in one year.²

1/ To a second order approximation the real interest rate is defined by the following expression: $r = (i - \pi) \times (1 - \pi)$, where r is the real interest rate, i is the nominal interest rate and π is the rate of price inflation as measured by the percent change in some price index (usually the all urban consumer price index). The usual definition, $r = i - \pi$ is a first order (linear) approximation. For large values of $(i - \pi)$ and π , the second order approximation is preferred.

2/ The mean absolute difference was -1.09 percentage points.

TABLE III
Selected Real Interest Rates
(percent)

Calendar Quarter	90-Day T-Bill	4 to 6 Month Comm. Paper	3 to 5 Year T-Notes
1972: 1	0.39	0.80	-2.32
2	0.30	1.02	-2.10
3	0.57	0.06	-2.10
4	-1.26	-2.27	-2.10
1973: 1	-3.39	-2.39	-1.73
2	-1.64	-1.59	-1.47
3	-1.56	-1.30	-0.59
4	-4.98	-3.05	-0.91
1974: 1	-3.97	-3.46	-0.45
2	-3.80	-1.91	0.72
3	-4.58	-1.17	1.28
4	-0.65	1.97	0.65
1975: 1	-0.41	-0.51	-0.08
2	-2.60	-1.65	-0.04
3	-0.82	0.89	0.21
4	1.21	1.60	-0.59
1976: 1	0.30	0.16	-1.54
2	-0.47	0.14	-1.99
3	-0.08	-1.15	-2.64
4	-3.47	-3.11	-3.97
1977: 1	-3.43	-1.80	-3.90
2	-0.35	-0.04	-4.14
3	0.15	-0.78	-4.39
4	-1.74	-2.41	-4.38
1978: 1	-3.78	-2.70	-4.25
2	-2.34	-1.78	-4.01
3	-1.82	-2.01	-3.94
4	-2.49	-2.44	-3.67
1979: 1	-4.25	-3.17	-3.40
2	-3.53	-3.22	-3.43
3	-3.56	-2.29	-3.40
4	-0.71	0.55	-1.75

Note:

In all cases the real interest rate is defined to equal the difference between the nominal interest rate and the percent change in the all urban consumer price index where both are stated at annual rates. For example, the real interest rate on 90-day U.S. Treasury Bills shown for a given quarter is the nominal historical average new issue rate for that quarter less the rate of consumer price inflation for the following 90 days. Commercial paper was assumed to mature in six months and U.S. Treasury Notes in four years.

The fact that many economic forecasters have consistently underestimated national inflation rates for the past eight years does not completely explain the persistence of negative real interest rates over the period. One would expect that lenders would have learned to tack a one or two percentage point premium onto published inflation forecasts. A fuller, more plausible explanation of the negative interest rate experience of the 1970's is called for.

A fuller explanation should include two points. First, lenders do not unilaterally dictate the level of interest rates. Others, particularly the Federal Government, and also the Federal Reserve, have much to say in the matter. If lenders are not too adamant about adding an extra inflation premium onto interest rates, the Federal Reserve is fully capable of enforcing a rate level consistent with published inflation forecasts, even when the forecasters are known by lenders to have systematically erred on the low side in the past.

Second, the alternatives to high grade securities are lower grade securities, commodities, other real assets and money. It may be that lenders reluctantly accepted what they (correctly) expected to be a negative real yield on high grade securities because they believed that the alternatives offered an even lower expected real yield.

The real yield on money is the negative of the inflation rate and thus much more negative than the real yield on high grade securities. Commodity speculation and investment, and investment in exotic assets (art, stamps, etc.) has traditionally been viewed as "nonprudent" by financiers. One does not have to strain to envision an equilibrium pattern of interest rates that matches recent historical experience, even given the possibility that many lenders may have doubted published inflation forecasts. In a sense, lenders may have accepted what they felt were inadequate real yields because economic experts were (afterall) forecasting a reduction in inflation and because they themselves were prejudiced against investment in commodities and exotic real assets. Sooner or later, however, one would expect these lenders to examine their prejudice against commodities and exotic assets, given that throughout this period such investments have offered very high real yields. In point of fact, this now seems to be occurring. Real interest rates on high grade securities may be rising to record heights now at least partly because more and more lenders are abandoning bond markets in favor of commodities and investment in other real assets. It may have taken eight years of negative real yields to beat down the prejudice against commodity investment.

WHAT IS CAUSING INFLATION?

Are there one or two most important causes of today's inflation or are a variety of factors responsible? If there are one or two identifiable primary causes, have they been accurately identified by policy makers? The answers to these questions are important to all of us. Right now, it would appear that the Carter Administration and the Federal Reserve Board have decided that the best way to fight inflation is to force the national economy through a major recession, with its attendant costs in lost output and unemployment. For such a policy to succeed in permanently lowering the rate of inflation to the six percent range, the national unemployment rate would likely need to be pushed to about nine percent and held there for several years.¹ The 1975 recession which produced unemployment rates in excess

1/ According to a recent **Business Week** article, the late Arthur Okun, former Chairman of the President's Council of Economic Advisors, and Data Resources, Incorporated, a major national economics forecasting team, both reached this general conclusion (**Business Week**, March 31, 1980, p.82).

TABLE IV
Annual Rate of Growth of Domestic
Money Supply
(percent)

Year Ended	M1	M2	M3
Dec. 31, 1974	4.6	7.2	6.7
Dec. 31, 1975	4.3	8.6	11.4
Dec. 31, 1976	6.2	11.4	13.1
Dec. 31, 1977	7.9	9.3	11.2
Dec. 31, 1978	6.7	8.6	9.4
Dec. 31, 1979	5.7	8.4	8.0
Geometric Mean	6.0	8.9	9.9

DEFINITIONS:

M1 is currency plus demand deposits;

M2 is M1 plus time and savings deposits at commercial banks other than large certificates of deposit;

M3 is M2 plus deposits at nonbank thrift institutions.

SOURCE: Calculated from data provided by the Board of Governors of the Federal Reserve System.

of nine percent was followed by a dip in the rate of growth of the consumer price index from 9.1 percent in 1975 to 5.8 percent in 1976. However, the following year the rate of consumer price inflation increased to 6.5 percent, followed by a further increase in 1978 to 7.7 percent, as economic recovery proceeded.

Although the Alaska economy is well insulated from the direct demand effects of a national recession, a particularly severe recession could have serious side effects on the State. New investment in Alaska by U.S. firms would likely be reduced during a severe recession both because of a recession-induced decline in profits available for investment and because the firms may envisage difficulty in marketing whatever products are produced (for example, tourist services and processed minerals). More importantly, even a severe U.S. recession is unlikely to much restrain the rise in world petroleum prices. The combination of high unemployment, reduced real income and steadily increasing fuel oil, gas, and gasoline prices could produce an overwhelming national mandate to Congress to reimpose price controls on domestically produced oil and gas, or to substantially stiffen the windfall profits tax. It goes without saying that either move could drastically alter Alaska's economic future.

For these reasons we have decided to examine more closely the principal explanations which have been given for today's inflation.

Milton Friedman and the Chicago monetarists argue that "inflation is always and everywhere a monetary phenomenon." Table IV shows the annual rates of growth of three leading measures of the money supply for the years ended December 31, 1974 through December 31, 1979. For the past two years all three measures have exhibited declining rates of growth. One would expect if money supply growth was the prime cause of inflation, that the inflation rate would be declining, not increasing. Furthermore, one might expect inflation rates somewhere near the rates of growth of the money supply. For the past year and one-half, the percent increase in consumer prices has exceeded the year earlier increase in the fastest growing money supply measure by several percentage points. Finally, the January and February inflation performance where the all items CPI-U-USA advanced at an annual rate of about eighteen percent each month, simply cannot be explained by the monetarists without invoking special considerations that render their theory vacuous (tautological).

Irwin L. Kellner in the March 1980 **Economic Report** of Manufacturers Hanover Trust Company states: "The real cause (of inflation) is too much money . . . In other words—inflation is a monetary phenomenon. That's it—pure and simple." Mr. Kellner, unfortunately, fails to adequately address himself to the disquieting evidence against the simple monetarist position presented in Table IV. I suppose one could argue that money growth impacts inflation three years later. One could then point to the 13.2 percent rate of M3 growth realized in 1976 as the "cause" of 1979's inflation. What then is the cause of 1980's 18 percent inflation? The 11.2 percent money growth experienced in 1977?

A second related and commonly offered "cause" of inflation is government deficit spending. Again, the evidence in support of that theory is simply not very strong.

The Federal Government does not control the money supply. The Federal Reserve Board does. If as argued above, excessive money supply growth cannot explain today's inflation, then the fact that the Federal Reserve Board deals in Federal securities does not create an analytical difference between Federal deficits and state-local deficits. In other words, if

TABLE V
Government Deficits in Perspective

	Federal Government	State and Local Governments	Total Government
Surplus or Deficit (-), NIA Basis¹ (Billions of \$)			
1974	-10.7	7.6	-3.2
1975	-70.6	6.2	-64.4
1976	-53.6	17.9	-35.7
1977	-46.3	26.8	-19.5
1978	-27.7	27.4	-0.3
1979	-10.5	24.4	14.0
1941 to 1945 Annual Average	-36.3	10.9	-25.4
Surplus or Deficit as Percent of GNP (%)			
1974	-0.8	0.5	-0.2
1975	-4.6	0.4	-4.2
1976	-3.1	1.1	-2.0
1977	-2.4	1.4	-1.0
1978	-1.3	1.3	0.0
1979	-0.4	1.0	0.6
1941 to 1945 Annual Average	-18.8	1.2	-16.6

1/ National income and product accounts basis.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis

excessive money growth is not the cause of today's inflation, then why should one single out Federal deficit spending as the cause? If there is some other reason than excessive money creation why government deficits cause inflation, then that reason should pertain to state-local deficits as well (in the absence of some other theory).

Therein lies the problem with the government deficit theory of inflation. Consider Table V. In 1978 the combined Federal-state-local government deficit in the national income accounts (NIA) was essentially zero (\$0.3 billion). In 1979, it was in **surplus** by \$14.0 billion. Since 1975, the combined government budget deficit has declined steadily. Unless one assumes some sort of very special lagged effect of government deficits on inflation, it is hard to see how declining government deficits can be the cause of increasing inflation, and why balance and surplus the past two years has had no perceptible effect.

While this point is not quite so strong when the Federal deficit is considered on its own, it is nonetheless still valid. The NIA Federal deficit has declined every year since 1975. Should this produce increasing inflation?¹

Inflation hit 10.7 percent in 1942 just prior to the imposition of wartime controls. At the time, however, the Federal deficit was \$31.4 billion, a figure larger than either the 1978 or the 1979 Federal deficit. Furthermore, the \$31.4 billion Federal deficit in 1942 constituted 20.9 percent of Gross National Product (GNP) in that year. Since 1974, the NIA Federal deficit has not exceeded 4.6 percent of GNP. In 1978 it was only 3.1 percent of GNP and in 1979 it fell to 0.4 percent of GNP. Is that a description of an engine of inflation?

There is one other popular leading candidate for chief "cause" of today's inflation. From time to time one hears that the cause of today's inflation is an overheated national economy. However, with a nationwide housing recession in progress, unemployment rates over 6.0 percent, and productive capacity utilization rates well below historic peaks and dropping, this explanation goes the way of excessive money growth and excessive deficit spending. All three popular theories simply do not bear up well under the evidence.

When one stops to think about it, one should not be surprised that conventional theories fail to account for today's inflation. As was observed above, throughout the decade of the 1970's, forecasters systematically underestimated future inflation rates. What has been suggested here is that the reason for the systematic underestimation was, quite simply, that conventional theories were inadequate. Forecasters who observed the data presented in Tables IV and V as they became available, had no basis for projecting the inflation that actually came to pass.

Is there a correct explanation for today's inflation? The answer is "No!" if by correct one means an answer that everyone will agree upon and which is capable of faultlessly explaining the recent historic experience. What follows is conjecture, a theory, but one which is at least plausible and consistent with experience.

1/ The unified budget Federal deficit has declined every year since 1976.

A given supply of money can finance a growing dollar volume of transactions per time period if it changes hands more often (or as economists would say, if the velocity of money increases). This much is definitional. The key to understanding today's inflation is understanding why the velocity of money has been increasing.¹ Stated so briefly that it begs criticism, a very good answer is that increased efficiency in processing transactions (electronic funds transfer, computerized check clearing, increased use of plastic money, etc.) has occurred at a time when external shocks (particularly OPEC price increases) have triggered an especially virulent wage-price spiral. Advances in banking technology have made possible a burst of inflation, and external shocks have kicked it off in a self-sustaining, self-accelerating spiral. Expectations have become attuned to increasing inflation.

The term "core" rate of inflation has entered our vocabulary in recent years. The core rate of inflation is that part of actual inflation which is explained by regulatory factors, loss of productivity, the direct effect of energy price increases, and other traditional factors. Various estimates place today's core rate of inflation at about 8 percent to 9 percent. What is needed is an explanation of inflation in excess of this core rate.

Today's inflation traces its roots all the way back to the excess demand generated during the Vietnam War as a result of national attempts to produce both guns and butter. Over the years since, our economic system has become increasingly sensitive to inflationary shocks. Reponse lags have shortened as automatic inflation adjustment clauses were first written into labor contracts, and later into sales contracts and mortgages. People became more and more accustomed to inflation and more and more willing and able to demand higher wages and prices, not only in response to past inflation but also in anticipation of expected inflation. As it became clear that consensus forecasts of inflation tended to be persistently low, the wage and price spiral began to speed up. OPEC price shocks contributed both directly to increasing inflation, and indirectly by acting as a highly visible signal that prices were on the rise.

In short, a classic wage-price spiral has become entrenched and has been "financed" not so much by growing increases in the **supply** of money as by increases in the **velocity** of money made possible by advances in banking technology.

In a world of administered prices such a process can explain today's inflation, even in a slack economy with declining money supply growth. Technology has opened the door to inflation by increasing the **potential** velocity of money. An inflationary psychology triggered by external shocks has moved the economy across the threshold.

WHAT CAN BE DONE?

The velocity of money cannot increase without limit in a given period of time. If a sufficiently stringent tight money policy is pursued long enough, the national economy will enter a severe recession and ultimately will purge itself of its inflationary spiral. This is the policy presently being pursued by both fiscal and monetary authorities.

1/ If the velocity of money had not increased over the past several years, a declining rate of growth of the money supply would not be consistent with increasing inflation and a rising (or constant) real volume of transactions.

A second method of slowing inflation to an acceptable level is mandatory wage and price controls. Historically, controls have not proven to be indisputably effective. At least part of the reason for their checkered history has to be the lack of effort that the economics profession has devoted to the problem of implementing controls efficiently. A generous estimate of the amount of research that has gone into the question of how to effectively implement controls would place it at about one-tenth of one percent of the effort put into examining the implications of Freudian psychology for financial analysis. In other words, it is no surprise that controls have been managed badly. Ignorance demands failure.

This is not the place to propose sweeping policy changes. It is, however, the place to lay out for our readers our best judgment of the choices before us and the implications of those choices. To that end it should be understood that the economics profession is not at a loss as to how to stop inflation, it is only at a loss as to how to stop it painlessly. To stop inflation (or at least to bring the annual rate down to the six percent range) the nation must undergo either a multi-year recession of some severity, or a multi-year period of mandatory wage and price controls. In neither case, however, can one hope to permanently arrest inflation as long as external shocks continue and, in particular, as long as OPEC continues to create periodic upheavals in world petroleum markets.

THE INFLATION OUTLOOK

There is a near zero chance that the United States will have the political will to endure either a severe multi-year recession or a multi-year period of mandatory wage and price controls. More than a few months of nine percent unemployment will almost certainly trigger stimulative fiscal and monetary policies. More than a year of mandatory controls will almost certainly trigger a relaxation of those controls. If the national economy experiences neither a multi-year recession nor a multi-year period of mandatory controls, it is very unlikely that inflation will be brought permanently below a rate of eight or nine percent per year.

What is likely is that one of the two "cures" (recession or controls) will be taken for a short while. At the moment, it appears that the Carter Administration will continue with the Federal Reserve in pursuit of the recession alternative. However, if the annualized rate of consumer price inflation does not soon start heading back to single digit levels, the public outcry for controls will become nearly unbearable. The question then will be whether or not Mr. Carter can bring himself to adopt the very policy advocated by his chief Democratic challenger for the Presidency. An informal consensus opinion that has surfaced is that if real progress against inflation is not seen by mid-June, Congress will authorize the President to invoke mandatory wage and price controls.

From our vantage point, there is only a 50-50 chance that recession will make inroads against inflation by mid-year. As far as controls are concerned, the key would seem to be the outcome of the Democratic convention. Whether or not Mr. Kennedy receives the nomination, there is a very real chance that the Democratic Party will write a controls plank into the platform and force Mr. Carter to run on it, unless inflation abates significantly over the next several months.

In short, the national economy's performance over the next six to eighteen months will be heavily influenced by presidential politics which, in turn, will be heavily influenced by the

inflation performance of the next three or four months. In the face of what some call the beginnings of runaway inflation, economic analysis of the future is doubly handicapped. While there is every reason to believe that inflation will slow by year's end, there is no way to predict with confidence whether it will slow because of recession, mandatory controls or both.

For the record, the present AEIRS forecast of Alaska inflation shows the Anchorage and Fairbanks consumer price indexes increasing at about fifteen percent annual rates in 1980, declining to about eight percent annual rates in 1981, and then reaccelerating to ten percent annual rates in 1982. This falling, then rising pattern is premised on the assumption that whatever federal anti-inflation policy is adopted, will be adopted for at most one year.

SPECIFIC IMPACTS ON ALASKA

As long as world oil price increases average an expected three to five percentage points in excess of the rate of consumer price inflation, the United States economy will be susceptible to periodic inflation crises. For the foreseeable future, it is reasonable to expect consumer price inflation on the order of eight to ten percent per year. As far as Alaska is concerned, one important question is "What does an annual rate of inflation of eight to ten percent, coupled with crude oil price increases of eleven to fifteen percent mean to the State's economy?"

By and large, it means that real (inflation adjusted) Alaska State government petroleum revenue will grow by about three to five percent per year, and, therefore, that spending will also show strong year-to-year gains. At the very least, therefore, one should not expect State government to become a fiscal drag on the Alaska economy for the next five years or so.

Nominal interest rates will remain high. However, if real (inflation adjusted) interest rates do not also remain at historically high levels, there is nothing intrinsically debilitating about double digit nominal interest rates. During credit crunch periods such as the one we are presently in, the State's relatively strong cash flow position could allow it to partly insulate the Alaska economy from temporarily high real interest rates. This is a policy option which deserves more careful consideration than can be given here. In general, there is no reason to expect high real interest rates to prevail in national markets for a long period of time.

In general, the major threat to Alaska presented by the present national economic crisis is a return to petroleum price controls. If petroleum prices continue to rise nationally at rates three to five percentage points in excess of the rate of consumer price inflation, the associated transfer of wealth from the bulk of the country (petroleum consumers) to Alaska (petroleum producers) may be self-terminating. It is not beyond the realm of imagination that the combination of high real energy prices and slow (or no) growth of real income should set off a public clamor for either recentralization of petroleum prices (possibly with a rollback) or for a confiscatory windfall profits tax with associated national redistribution of the proceeds.

II. CAN SUBSIDIES MATTER?

The word "subsidy" as used here denotes any transaction that reduces at public expense, the costs of doing business for a private venture. A subsidy should be distinguished from a public investment. In the case of a public investment, a market level uncertainty adjusted dollar rate of return is expected at the time public funds are committed.¹ A subsidized venture, on the other hand, offers its uncertain future return partly or entirely in the form of jobs or in the form of some other public benefit. The jobs and other public benefits are viewed as compensation for a below normal uncertainty adjusted money rate of return to the public investor. A subsidized venture by virtue of its need for subsidy either would not be launched without subsidy or would not be done in the same way or in the same place, or under the same conditions as it would without subsidy.

Public opinion on the use of subsidies to promote economic development can be partitioned into three categories. First, there are some who, with few exceptions, are prepared to advocate State subsidies for nearly every project that is proposed. Second, there are those who argue that studies done elsewhere "prove" (or at least strongly suggest) that temporary subsidies cannot permanently increase the level of economic activity in Alaska. Finally, there is the opinion shared by the majority of Alaskans, to the effect that a subsidy is worthwhile if it can be shown to produce an acceptable net economic benefit. Prominent among those whose opinions fall into this latter group is Governor Jay Hammond who has frequently made the point that the goodness or badness of a particular subsidy depends upon the relative size of the benefits and costs it generates.

This article is a discussion of the potential effectiveness of temporary subsidies in contributing to the creation of new permanent jobs in Alaska. The issue is of vital importance. If subsidies to private industry cannot influence private industrial location decisions, or if subsidies are influential only as long as they stay in place, then there is no compelling economic argument for their use. On the other hand, if selected temporary subsidies really can play a role in generating self sustaining economic growth, a case can be made for their use here in Alaska. From this it follows that a case can also be made for retaining a significant part of Alaska's oil wealth in a fund that can be tapped for such a purpose when a justifiable application rises.

The issue of the potential effectiveness of subsidies is not the only controversial aspect of their use. Even if temporary subsidies can be shown to be effective in generating permanent economic growth, one might still argue, as others have, that Alaska ought not to encourage economic growth because a larger economy conflicts with the Alaskan lifestyle. For the sake of a sharpening of focus, this point will not be discussed here.

In the next section, the question of whether or not Alaska subsidies can influence industrial location decisions will be addressed. At that stage, no attempt will be made to differentiate between temporary or permanent subsidies. The question discussed there is "Does Alaska have enough dollars and a broad enough array of policy tools at its disposal to hope to bring about an increase in the number of private sector jobs in the State?" Some readers will feel as though the material in that section belabors the obvious. It may, but if it does, it does so because even the obvious should be written down and supported at some point. The final section takes up the question of the potential for **temporary** subsidies to make a **permanent** difference in the number of jobs available to Alaskans.

1/ Investors demand a higher rate of return, the more uncertain the project's future profitability.

THE INDUSTRIAL LOCATION DECISION

It is one thing to observe that a particular type of subsidy **has not**, on balance, noticeably altered the interstate allocation of aggregate economic activity in the Lower 48 states. It is quite another thing to say that the presently accruing pool of public Alaska financial capital **cannot** be effective in stimulating sustainable Alaska economic growth. In what has to be a basic non-sequitur, some persons have on occasion argued that subsidies cannot be effective in Alaska because many studies show that tax incentives and municipal bond offerings have not been markedly influential in the Lower 48. Alaska's economic environment is sufficiently different from that of the other states that the results of studies done elsewhere cannot be casually generalized to our situation.

A statement which will be treated here as an axiom is that, all other things equal, new industrial plant locations are chosen from a list of candidates on the basis of maximum uncertainty adjusted profitability.¹ A second axiom is that the larger the investment, the more intensive and organized the search for a location which maximizes profitability.

Multi-million dollar investment decisions are made carefully. Billion dollar investment decisions are labored over. Managers who may respond to a variety of off-hand incentives in conducting their day-to-day operations, become relatively strict profit maximizers (allowing for uncertainty) when evaluating alternative plant sites.

We live in a world of uncertainty. For some producers, uncertain energy and raw material supplies lower the expected scale of output and the expected volume of profits over the life of an investment. If periodic energy and raw material shortages are expected to reduce the annual volume of salable output and also to reduce profits,² then all other things equal, a plant will be located where it can obtain an assured supply of energy and raw materials. At the very least, the assurance of stable long term energy and raw material supplies can offset costs which might be higher than at another location.

The State of Alaska can reduce taxes, subsidize operating costs, subsidize plant construction, assure energy supplies, and in some cases, guarantee a long term supply of raw materials. In short, the State has it in its power to alter the profitability of production in Alaska. Therefore, it can influence industrial location decisions in favor of location in Alaska, at least marginally. This much should be virtually indisputable. The key questions are (1) by how much can the State alter the relative profitability of doing business in Alaska? and (2) can temporary subsidies generate a permanent increase in jobs. Question (1) is the issue to which we now turn. Question (2) is discussed after that.

ALASKA'S POTENTIAL CLOUD

The profitability of production in Alaska is low for certain industries which must export or which require a large in-state market. Clearly, some Alaska export industries such as fish production and wood processing presently offer adequate profits to keep them in existence, as do smaller businesses selling to the small Alaska market. The subsidy issue is raised be-

1/ For the sake of precision: All other things equal, a new plant will be located where the present value of future certainty equivalent profits is maximized.

2/ The expected profit reduction depends on the price response to output reductions.

cause growth possibilities in these areas do not promise enough job creation to offset the decline in the State's petroleum base which must someday occur. Whether the decline in the Alaska petroleum industry occurs in ten years or forty years is almost academic. If Alaska is fortunate enough to experience, say, a forty year petroleum boom, there may be time to develop an alternative economic base if appropriate State development policies are successfully pursued. However, under no circumstances would the potential for relatively long term stimulus from petroleum development alter the need to begin now to generate an economic substitute, if a future crisis is to be avoided, and if such substitutes can be found.¹

Given Alaska's need to examine growth possibilities in industries which may not be profitable today, does Alaska have the policy tools and financial wherewithal to raise the profitability of presently low profit industries to the point where they will be located in the State? A comprehensive answer really cannot be given here. However, an examination of the data available does suggest that permanent subsidies which are not unthinkably large could stimulate major new industries to locate here.²

Data from the U.S. Census Bureau's Annual Survey of Manufacturers for 1976 for three electrical energy intensive industries are presented in the text table. The three industries are primary aluminum (SIC 3334), primary copper (SIC 3331) and hydraulic cement (SIC 3241).

Nationally in 1976, these three industries employed 68,700 workers. If we assume that wage and salary rates in Alaska are forty percent above the national average, the amount of annual subsidy, in 1979 dollars, needed to offset higher Alaska labor costs **for the entire 1976 industry** in these three industries combined is \$735.5 million. On a per firm basis averaged across all three industries, the annual subsidy (1979 dollars) required to offset higher Alaska labor costs would be, at most, \$2.6 million. If we assume that a doubling of this annual subsidy would be enough to offset Alaska's higher construction costs and distance from the market in which the product would be sold, it would appear that an annual maximum direct subsidy of about \$1.5 billion (1979 dollars) would be enough to attract the nation's entire primary copper, primary aluminum and hydraulic cement industries to Alaska (ignoring the cost of transporting raw materials to the processor).

Now, it is not being suggested that Alaska attempt to attract these three industries in their entirety or even in part. Nor is consideration of permanent subsidies being urged. However, it is being suggested that the magnitude of direct subsidy needed to attract a significant part of such industries is manageable. It may not be worthwhile. There may be more cost effective ways to proceed. But at least it would appear that the attraction of a substantial share of new investment in these industries (and possibly others) to Alaska is a financially do-able task. In fact, if Alaska were to attract a large segment of these industries here, the per

1/ See, for example, "Alaska's Emerging Fiscal Crisis" by the economists at the Alaska Pacific Bank, or "Government Fiscal Planning in the Face of Declining Resource Revenue: The Alaska Case," Reaume, D. M., Alaska Department of Commerce and Economic Development, December 1977.

2/ Again, in the next section, the logical possibility of temporary subsidies achieving the same results will be discussed.

**ECONOMIC CHARACTERISTICS OF
SELECTED INDUSTRIES
1976
(dollar amounts in millions)**

Entire Industry	Primary Aluminum (SIC 3334)	Primary Copper (SIC 3331)	Hydraulic Cement (SIC 3241)	Total of Three
Value of Shipments	1,465.9	3,549.7	2,603.8	7,619.4
Salaries and Wages	461.6	221.8	445.3	1,128.7
Supplemental Labor Cost	121.7	68.6	124.2	314.5
Cost of Materials	2,314.1	2,759.7	1,163.5	6,237.3
Memo: Value Added	3,852.9	746.0	1,461.3	6,060.2
Memo: Purchased Electricity	470.9	N/A	185.6	N/A
Number of Establishments	54	32	192	278
Employment	26,300	14,300	28,100	68,700
Per Establishment				
Value of Shipments	27.146	100.928	13.561	
Salaries and Wages	8.548	6.931	2.319	
Supplemental Labor Cost	2.254	2.144	0.647	
Cost of Materials	42.854	86.241	6.060	
Memo: Value Added	71.350	23.312	7.611	
Memo: Purchased Electricity	8.720	N/A	0.967	
Employment	487	447	146	
Per Establishment (1979 \$)¹				
Value of Shipments	34.587	141.333	17.278	
Salaries and Wages	10.891	8.831	2.955	
Supplemental Labor Cost	2.872	2.732	0.824	
Cost of Materials	54.600	109.880	7.721	
Memo: Value Added	90.907	29.702	9.697	
Memo: Purchased Electricity	11.110	N/A	1.232	

1/ Inflated by the U.S. Producer Price Index for Industrial Commodities.

2/ Source: Annual Survey of Manufactures, 1976, "Industry Profiles," Services M76(AS)-7, U.S. Bureau of Census, Washington, D.C., June 1978. Also Annual Survey of Manufactures, 1976, "Fuels and Electric Energy Consumed," Series M76(AS)-4.1, U.S. Bureau of Census, Washington, D.C., March 1978. The Number of Establishments is from County Business Patterns, 1976, "U.S. Summary," Series CBP-76-1, U.S. Bureau of Census, Washington, D.C., August, 1978.

establishment subsidy might decline. Once a major portion of an industry's product is Alaskan, the Alaskan firms would begin to acquire the market power needed to pass their higher costs onto their customers.

INDUCED PUBLIC EXPENDITURE

The figures discussed above represent direct subsidies to the industries. A form of indirect subsidy is the "extra" state and local government expenditure needed to support the increased population which accompanies job creation. In this context, "extra" refers both to the fact that growth brings more people and to the fact that in Alaska marginal per capita tax revenue generated by new (nonpetroleum) economic growth is not expected immediately to equal the marginal per capita public spending requirements imposed by that growth. This situation is another manifestation of Alaska's extreme dependence on the petroleum industry. A few arbitrary (though roughly accurate) assumptions can help to quantify an upper limit to the near term level of this indirect subsidy.

In 1979 total state and local government spending per capita in Alaska was between \$4,500 and \$5,000. If 68,700 new basic sector jobs were actually created in Alaska, and if seventy-five percent of these jobs went to migrants who each brought to Alaska 1.5 persons in addition to himself (or herself), and finally if only thirty percent of required new government spending was covered by induced revenue, then the 68,700 new jobs would generate a population increase of 128,812 persons and an **excess** (over induced revenue) annual government expenditure of between \$405.8 million and \$450.8 million.¹

Adding in the \$1.5 billion direct subsidy previously calculated, the total estimated direct and indirect annual subsidy required to locate the nation's entire 1976 primary aluminum, primary copper, and hydraulic cement industries in Alaska comes to about \$2.0 billion.

Now, it is entirely possible that marginal per capita government spending requirements will decline as the State develops and that marginal per capita induced tax revenue will increase. Furthermore, such considerations as market power and assured supplies of raw materials can lower required direct subsidies. However, even if neither effect takes hold, it seems hard to deny the conclusion that as long as the State's ability to subsidize is not impaired, Alaska can significantly alter its industrial landscape through the use of permanent subsidies. The question to which we now turn is whether or not there are reasons to believe that temporary subsidies can lead to permanent economic gains. Certainly, it is a fact that jobs permanently propped up by subsidies, in turn financed by petroleum revenue, only exacerbate the ultimate distress that would be caused by a loss of petroleum revenue.

TEMPORARY SUBSIDIES, PERMANENT GAINS

In this section, the raw ability of temporary subsidies to create permanent job gains is at issue. A related point deserving of much detailed analysis on its own is the question of the timing of subsidies. Clearly, if government development policies simply create a second economic base existing alongside of the State's petroleum based economy (a form of dual economy, if you will), then the absolute number of Alaska jobs and incomes jeopardized by a decline in Alaska petroleum activity need not differ from the number that would be in jeopardy if there were no second economic base. In other words, in the best of all possible worlds new nonpetroleum jobs should be created at a rate that just offsets the future loss of

1/ 1979 dollars. Assuming per capita spending at the 1979 level.

petroleum based jobs. This point should be taken as one more reason why subsidies, even temporary subsidies, have not as yet been shown to make good economic sense in the final analysis. A case may eventually be made for their use. However, for now, the jury is still out.

In principal, temporary subsidies can create permanent job gains in at least six ways.

1. **Increased Market Share**

If an initial subsidy leads to the establishment of a significant part of an industry in Alaska (on a national or international scale), the Alaska operators may gain enough market power to enable them to pass their higher costs onto their customers. A case in point is bottomfish. If Alaska processors eventually handle all or virtually all of the bottomfish caught in Alaska waters, as a group they would control an important segment of the world's food supply. Under such circumstances, they could act as price setters rather than as price takers. Removal of the subsidy could then lead to higher product prices and not simply to lower profits.

2. **Scarce Materials, Multi-Price Markets**

Alaska has been called a storehouse of raw materials. At the present time, the United States imports a high percentage of its strategically important raw materials from potentially unstable or unfriendly nations. Examples include chromium, manganese, tin and zinc.¹ Just as the U.S. Congress has determined that farm price supports are in the national interest, so could it determine that the purchase of (possibly) high priced Alaskan metal is in the national interest, even if lower cost foreign supplies were available. If this were to happen, temporary State subsidies necessary to initially capture certain processing activities may be removable. In essence, the function of subsidizing the venture would either be passed onto the Federal government, or to purchasers in the form of higher prices.

3. **The Bootstrap Effect**

This effect should be viewed as operable only in conjunction with gains in overall Alaska economic activity. In effect, it says that the total may be larger than the sum of the parts.

As one result of an overall development effort, certain products which might initially need to be subsidized may eventually be produceable at a normal profit for sale to an enlarged Alaska market at prices below that of imports from out-of-State. The effect in question could either be economies of scale or simply a situation where a small percentage of a larger market is enough to insure profitability. Examples include foods and beverages (reindeer products, beer), cement, and coal. In effect, in-State producers would be partly shielded by the cost of shipping consumer or bulk goods to Alaska.

1/ According to the U.S. Bureau of Mines, the U.S. imports (net) 98% of the manganese it uses, 86% of the tin, 89% of the chromium, and 58% of the zinc. The list of major sources for these metals includes Brazil, Gabon, South Africa, the U.S.S.R., Turkey, Zimbabwe Rhodesia, Malaysia, Thailand, Bolivia, and Indonesia.

4. **Induced Growth**

In addition to normal support jobs which would be generated in response to subsidized basic sector growth, other jobs in industries not strictly of a support nature would come into existence as the Alaska market grew larger. If the ratio of induced government revenue to induced government spending eventually rises above unity (eventually it must, or else there would be no balanced government budgets anywhere), the extra revenue could be used to help to maintain the initial subsidies on the basic growth that started the process. The initial subsidy may stay in place. However, taken as a whole, the new economic activity receives a reduced **net** subsidy. In principal, the net subsidy could ultimately go to zero.

5. **Uniquely Alaskan Products**

With proper marketing, furs, carvings, conceivably even macho Alaskan beer could be sold at a premium price on national and world markets. If marketing efforts were successful, initial subsidies could be phased out.

6. **Lower Cost of Doing Business**

Between 1967 and 1973, the Anchorage Consumer Price Index rose only 98.4 percent as fast as the corresponding national index. After a brief reversal during the 1974-1977 construction period of the trans-Alaska oil pipeline, this trend has reasserted itself.

The cost of doing business in Alaska will decline relative to the cost elsewhere as economies of scale take effect, and as in-State competition increases. To the extent new subsidized development increases the size of the Alaska market, it can be effective in lowering the relative cost of doing business in Alaska, and therefore, it can be effective in removing part of the need for subsidy.

In addition, lower costs of doing business in Alaska can contribute to secondary economic growth of the sort discussed in (4) above. To the extent this happens, net subsidies can decline, possibly to zero.

Finally, it may be that costs are higher in Alaska partly because they have always been higher. New firms must pay the going wage and the going prices of materials and capital and hence must charge prices which are also high. Over time, or through a joint private-public effort, this portion of Alaska's cost disadvantage may decline.

It would be a step ahead if these six effects had already been quantified for a range of development projects. Because the needed quantification has yet to be done for even one project, one cannot conclude that temporary subsidies will indeed work. The strength of the six effects listed above may be insufficient. One should, however, be prepared to conclude that the question is open and deserving of future research.

CONCLUSION

This paper is meant to open the door to an organized discussion of the merits of using temporary subsidies to promote economic development in Alaska. Only two of the many points deserving formal consideration have been addressed. First, it would seem that Alaska does have the economic ability to influence firms to locate here rather than elsewhere. Second, there are a number of ways in which temporary subsidies may lead to permanent job gains, none of which has been adequately quantified for even one project.

The policy conclusions suggested by the observations made here are (1) that Alaska should invest in further research on these issues; and (2) that Alaska should retain a significant piece of its public capital in a fund that can be tapped if and when a case for a particular subsidy is adequately made.